ORDER NO. MD9802027C2

Service Manual

CD Stereo System

SA-AK25

*2
MASH
multi-stage noise shaping
*3
DOLBY B NR

COMPACT disc DIGITAL AUDIO

CD Stereo System

SB-AK25 SA-AK25 SB-AK25

Colour
(K) ..... Black Type

Areas
(E) ..... Europe.
(EB) ..... Great Britain.
(EG)..... Germany.

*1: Made in MESA.
*2: MASH is a trademark of NTT.
*3: Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol DD are trade marks of Dolby Laboratories Licensing Corporation.

System: SC-AK25

CD stereo system	SA-AK25
Speaker	SB-AK25 *1

Tape Deck: AR-2 Mechanism Series
Traverse Deck: RAE0152Z Mechanism Series

Specifications

AMPLIFIER SECTION

RMS power output	
10% Total harmonic distortion	
80 Hz – 12 kHz both channels driven	70 W per ch (6 Ω)
1% Total harmonic distortion	
80 Hz – 12 kHz both channels driven	50 W per ch (6 Ω)
Input sensitivity	
AUX	250 mV
Input impedance	
AUX	10 kΩ

FM TUNER SECTION

Frequency range	87.50 – 108.00 MHz (50 kHz steps)
Sensitivity	
S/N 26 dB	1.5 µV
Antenna terminal(S)	75 Ω (unbalanced)

AM TUNER SECTION

Frequency range	522 – 1629 kHz (9 kHz steps)
Sensitivity	
S/N 20 dB	500 µV/m

CASSETTE DECK SECTION

Track system	4 track, 2 channel
Heads	
Record/playback	Solid permalloy head
Erasure	Double gap ferrite head
Motor	DC servo motor
Recording system	AC bias 100 kHz
Erasing system	AC erase 100 kHz
Tape speed	4.8 cm/s
Frequency response (+3, –6 dB) at DECK OUT	
NORMAL (TYPE I)	35 Hz – 14 kHz
CrO_2 (TYPE II)	35 Hz – 14 kHz
S/N	
Dolby NR off	50 dB (A weighted)
Dolby NR on	60dB (CCIR)
Wow and flutter	0.18 % (WRMS)
Fast forward and rewind times	Approx. 120 seconds with C-60 cassette tape

CD SECTION

Sampling frequency	44.1 kHz
Decoding	16 bit linear
Beam source/wave length	Semiconductor laser / 780 nm
Number of channels	Stereo
Frequency response	20 Hz – 20 kHz (+1, –2 dB)
Wow and flutter	Below measurable limit
Digital filter	8 fs
D/A converter	MASH (1 bit DAC)

GENERAL

Power supply	
For (EB) area	AC 230-240 V, 50 Hz
For (E) and (EG) areas	AC230 V, 50Hz
Power consumption	156 W
Dimensions (W × H × D)	270 × 336 × 347 mm
Weight	7.1 kg

Notes :
1. Specifications are subject to change without notice. Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

Before moving or shipping this system

Prepare the system as described below to prevent damage to the mechanism.
1. Removal all CDs.
2. Press CD.
3. Press ■ for 5 more seconds.
   The display will change from "WAIT" to "LOCKED" to "GOOD BYE" and finally "ZZZ". Then, the unit will be turned OFF automatically. (This will set the so-called "shipping mode".)
4. Unplug the stereo.

The shipping mode will turn OFF automatically when you turn the power ON the next time.

⚠WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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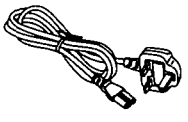
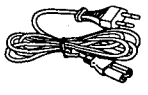
■ Accessories

- AC power supply cord [for (EB) area] (VJA0733) 1

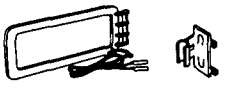


- AC power supply cord [for (E) and (EG) areas] (RJA0019-2K) 1

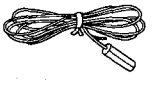


- Antenna pulg adaptor [for (EB) area] (SJP9009) 1

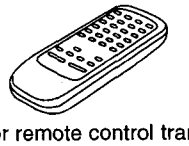
- AM loop antenna set (RSA0022) 1



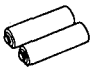
- FM indoor antenna (RSA0007) 1



- Remote control transmitter (EUR644853) 1



- Batteries for remote control transmitter (R6/LR6, AA, UM-3) 2
  Note: These are available on sales route.



■ Before Repair

(1) Turn off the power supply. Using a 10 Ω, 10 W resistor, connect both ends of power supply capacitors (C508) in order to discharge the voltage.

(2) Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current at 50 Hz in NO SIGNAL mode should be shown below with respect to supply voltage 230 V.

Power supply voltage	AC 230 V, 50 Hz
Consumed current	Less than 210 mA

■ Protection Circuitry

The protection circuitry may have operated if either of the following conditions is noticed:

- No sound is heard when the power is switched ON.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.

If this occurs, follow the procedure outlined below:

1. Switch OFF the power.
2. Determine the cause of the cause of the problem and correct it.
3. Switch ON the power once again.

Note:

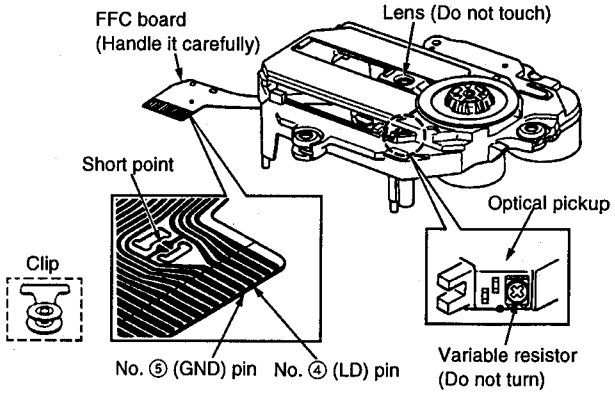
When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and then ON again.

■ Handling Precautions for Traverse Deck

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.
So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

• Handling of traverse deck (optical pickup)

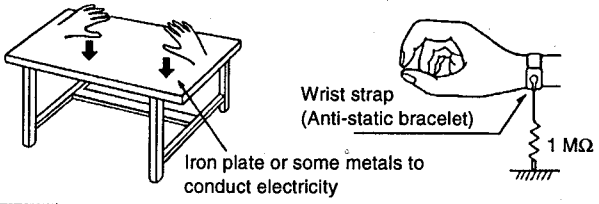
1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. To protect the laser diode against electrostatic breakdown, short the flexible board (FFC board) with a clip or similar object.
3. Take care not to apply excessive stress to the flexible board (FFC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.



• Grounding for electrostatic breakdown prevention

1. Human body grounding
   Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding
   Put a conducive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution:
The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).



Caution when Replacing the Traverse Deck:

The traverse deck has a short point shorted with solder to protect the laser diode against electrostatic breakdown. Be sure to remove the solder from the short point before making connections.

CAUTION:
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

■ Precaution of Laser Diode

CAUTION: This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pick up lens.
Wave length: 780 nm
Maximum output radiation power from pick up: 100 μW/VDE

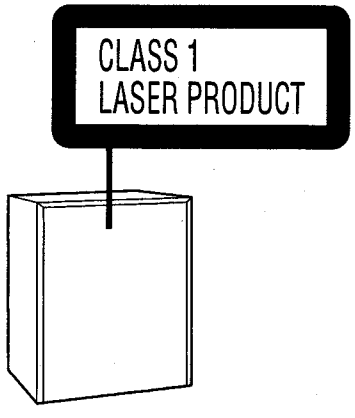
Laser radiation from the pick up unit is safety level, but be sure the followings:

1. Do not disassemble the pick up unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pick up unit. It was already adjusted.
3. Do not lock at the focus lens using optical instruments.
4. Recommend not to lock at pick up lens for a long time.

ACHTUNG: Dieses produkt enthält eine laserdiode. Im eingeschalteten zustand wird unsichtbare laserstrahlung von der lasereinheit adgestrahit.
Wellenlänge: 780 nm
Maximale strahlungsleistung der laserinhelt: 100 μW/VDE

Die strahlung an der lasereinheit ist ungefährlich, wenn folgende punkte beachtet werden:

1. Die lasereinheit nicht zerlegen, da die strahlung an der freigelegten laserdiode gefährliich ist.
2. Den werksseitig justierten einstellregler der lasereinreit nicht verstellen.
3. Nicht mit optischen instrumenten in die fokussierlinse blicken.
4. Nicht über längere zeit in die fokussierlinse blicken.



DANGER	INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.	(Inside of product)
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.	(Indersiden at apparatet)
VARO!	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTÖNTÄ LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.	(Tuotteen sisällä)
VARNING	OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STARÅLEN.	(Apparatens insida)
ADVARSEL	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.	(Produktets innside)
VORSICHT	UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.	(Im Inneren des Gerätes)

■ Caution for AC Main Lead

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ⓐ or the BSI mark ♡ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFETY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral, Brown: Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N coloured Black or Blue.
The wire which is coloured Brown must be connected to the terminal which is marked with letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF–KEEP DRY.

Before use

Removal the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

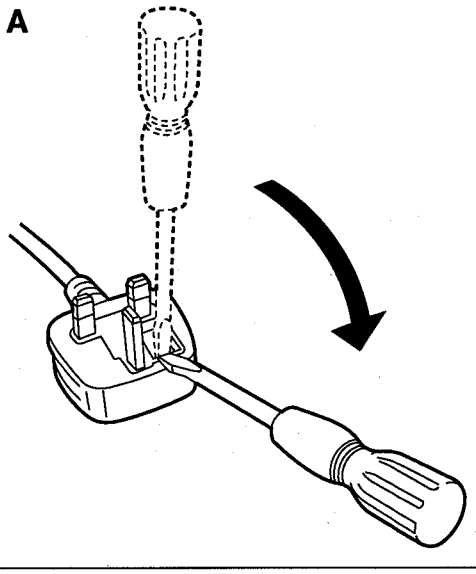
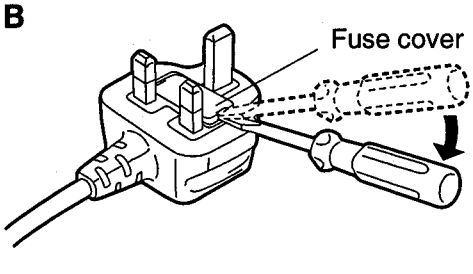


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

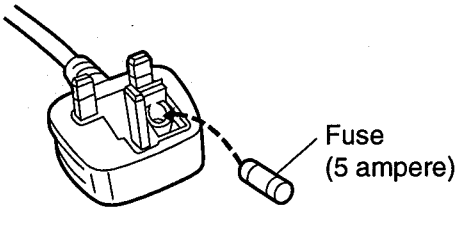
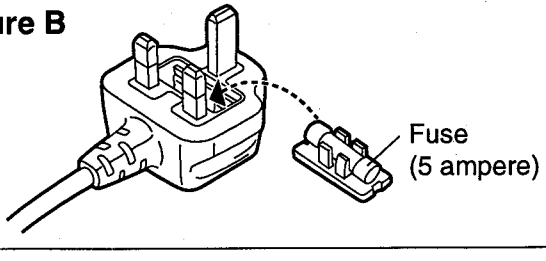
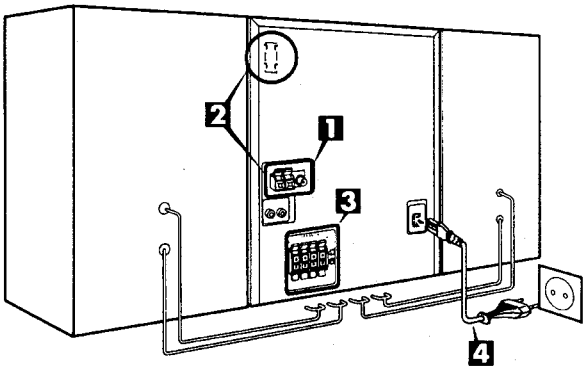
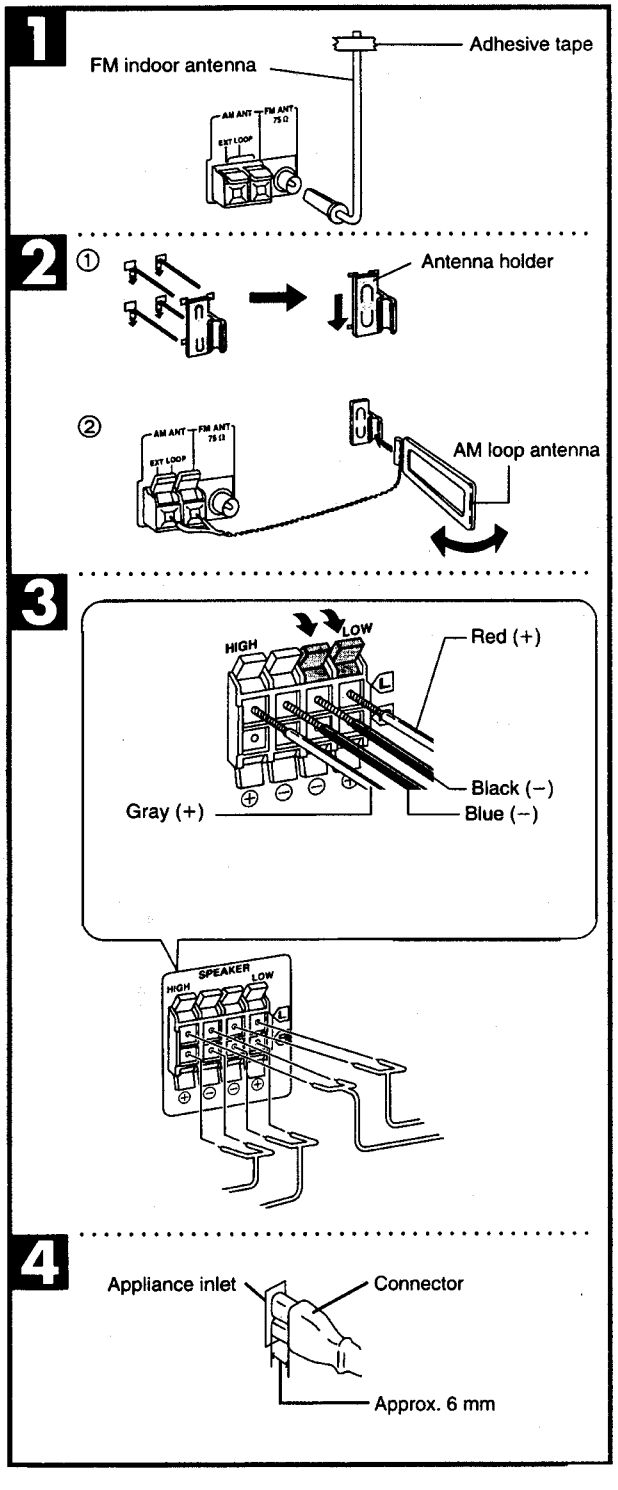


Figure B



■ Connections





Basic connections (for supplied accessories)

- Plug the AC power cord into a household AC outlet only after all other connections have been made.
- To prepare the AM loop antenna wire and speaker cords, twist the vinyl cover tip and pull off.

1 Connect the FM indoor antenna.

Tape the antenna to a wall or column, in a position where radio signals are received with the least amount of interference.

Note

For best reception sound quality:
An FM outdoor antenna is recommended.

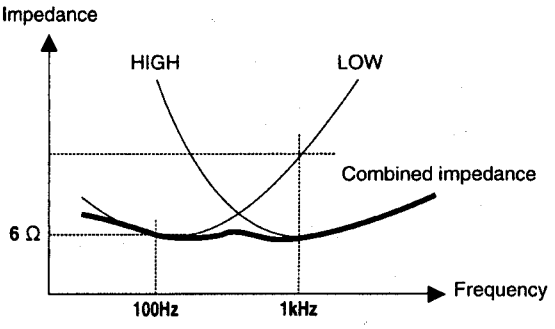
2 Connect the AM loop antenna.

After attaching the antenna, turn on the system and tune in a broadcast station. Then, turn the antenna to the angle of best reception and least interference.

3 Connect the front speaker cables.

Connect each end of the speaker cables to the terminal lever of the same color.

When speakers are connected to the low and high terminals on the back of the main unit
They are designed to have a combined impedance of 6Ω.
Be sure to use only the speakers supplied.



Caution

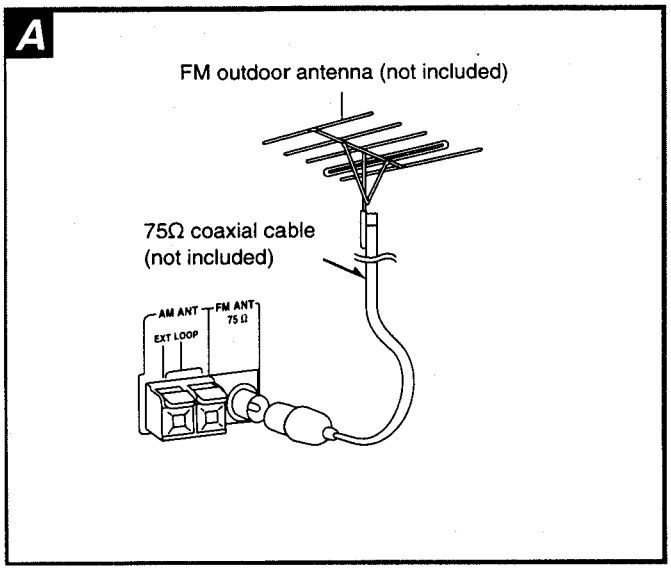
- Never use speakers other than those supplied. For instance, if you connect speakers with an impedance of 6Ω each and plug them into the low and high terminals, you will only have a combined impedance of 3Ω.
- To prevent damage to circuitry, never short-circuit positive (+) and negative (−) speaker wires.

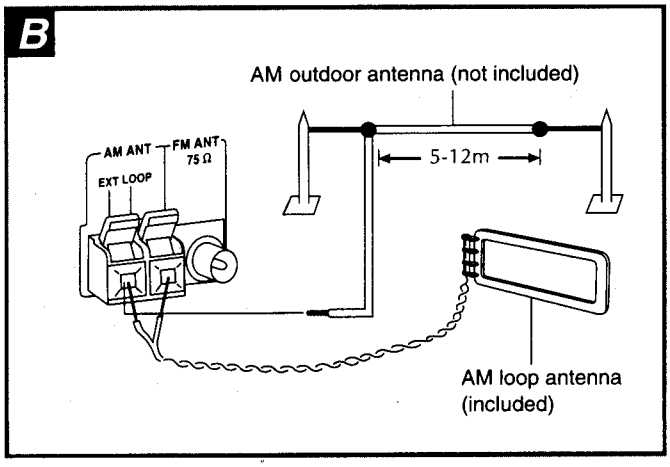
Caution
Use the speakers only with the recommended system. Failure to do so may lead to damage to the amplifier and/or the speakers, and may result in the risk of fire.
Consult a qualified service person if damage has occurred or if you experience a sudden change in performance.

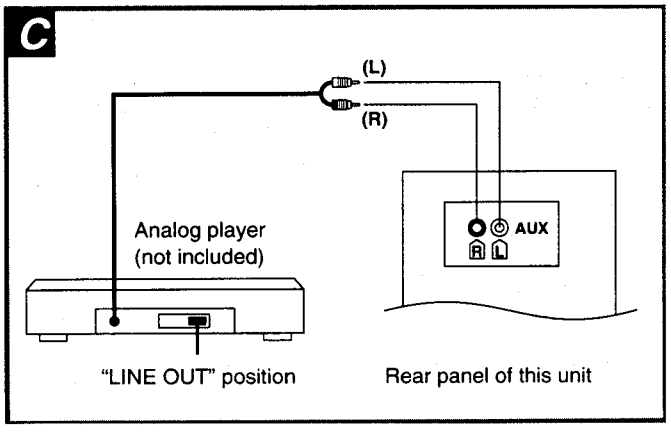
4 Connect the AC power cord.

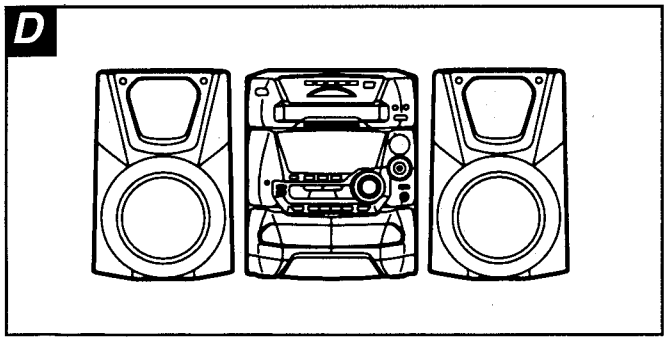
(United Kingdom only)
BE SURE TO READ THE CAUTION FOR AC MAINS LEAD ON PAGE 4 BEFORE PROCEEDING TO STEP 4.

Insertion of connector
Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing.
However there is no problem using the unit.









Optional antenna connections

You may need an outdoor antenna if you use this system in a mountainous region or inside a reinforced-concrete building, etc.

FM outdoor antenna A

Disconnect the FM indoor antenna if an FM outdoor antenna is installed.

Note

An outdoor antenna should be installed by a qualified technician only.

AM outdoor antenna B

Connect the outdoor antenna without removing the AM loop antenna. Run 5 to 12 m of vinyl-covered wire horizontally along a window or other convenient location.

Note

When the unit is not in use, disconnect the outdoor antenna to prevent possible damage that may be caused by lightning. Never use an outdoor antenna during an electrical storm.

External unit connection C

- For details, refer to the instruction manual of the units which are to be connected.
- This example shows how to connect an analog player with the PHONO OUT/LINE OUT switch.
- When units other than those described below are to be connected, please consult with your audio dealer.

Note

- Only an analog player with a built-in phono equalizer can be connected.
- Set the switch to the "LINE OUT" position at the back of the analog player.

■ Placement of speaker D

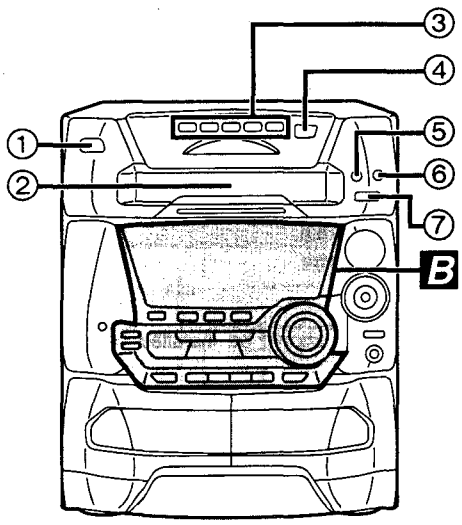
For your listening pleasure, keep your speakers from touching the system.
Speakers are designed identically so that no left or right channel orientation is necessary.

Note

You cannot take the front net off the speakers.

■ Front Panel Controls

A

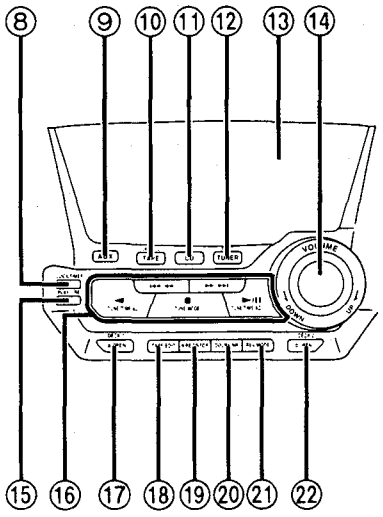


Main unit A

No.	Name
①	Power "STANDBY ⏻/ON" switch (POWER, STANDBY ⏻/ON)
②	Disc tray
③	Disc select buttons and indicators (DISC 1–DISC 5)
④	CD manager button (CD MANAGER)
⑤	Disc tray open/close button (▲ OPEN/CLOSE)
⑥	Disc check open button (▲ NEXT OPEN)
⑦	Random play button (RANDOM)

Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

B

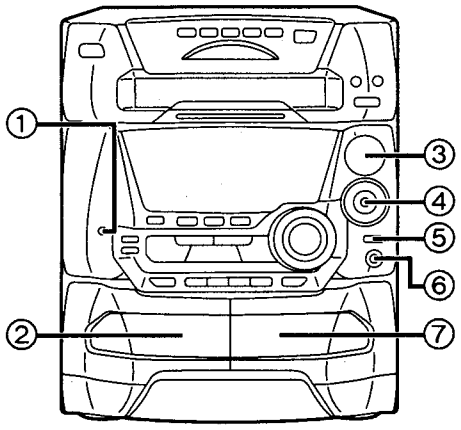


Center console B

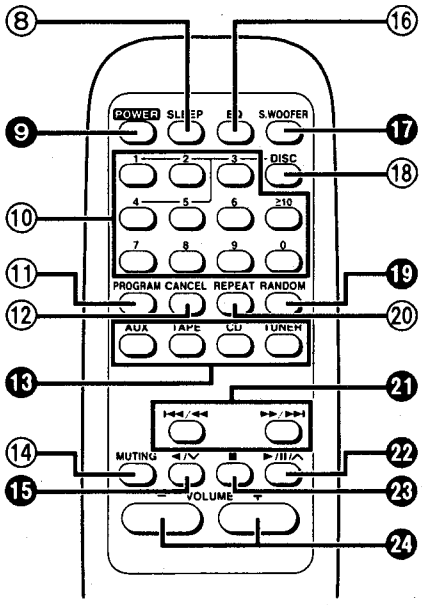
No.	Name
⑧	Clock/timer button (CLOCK/TIMER)
⑨	AUX button (AUX)
⑩	Tape/deck select button (TAPE, DECK 1/2)
⑪	CD button (CD)
⑫	Tuner/band select button (TUNER, BAND)
⑬	Display
⑭	Volume control (VOLUME)
⑮	Play timer/record timer button (◴ PLAY/◴ REC)
⑯	Basic operating buttons
⑰	Deck 1 open button (▲ OPEN, DECK 1)
⑱	Tape edit button (TAPE EDIT)
⑲	Recording start/stop button (● REC/STOP)
⑳	DOLBY noise reduction button (DOLBY NR)
㉑	Reverse mode select button (REV MODE)
㉒	Deck 2 open button (▲ OPEN, DECK 2)

Functions change according to the source.

A



B



Main unit (continued) A

No.	Name
①	Display select/demonstration button (-DISPLAY/–DEMO)
②	Deck 1 cassette holder
③	Acoustic image equalizer display (AI EQ)
④	Sound equalizer control/indicators (SOUND EQ)
⑤	Super woofer on/off button (S. WOOFER)
⑥	Headphone jack (PHONES)
⑦	Deck 2 cassette holder

Remote control B

Buttons such as ❾ function in exactly the same way as the buttons on the main unit.

No.	Name
⑧	Sleep button (SLEEP)
❾	Power button (POWER)
⑩	Numeric buttons
⑪	Program button (PROGRAM)
⑫	Cancel button (CANCEL)
⓭	Input selection buttons (AUX, TAPE, CD, TUNER)
⑭	Muting button (MUTING)
⓯	◀/∨ button (◀/∨)
⑯	Equalizer button (EQ)
⓱	Super woofer on/off button (S. WOOFER)
⑱	Disc button (DISC)
⓳	Random button (RANDOM)
⑳	Repeat button (REPEAT)
㉑	⏮/◀◀ ▶▶/⏭ buttons (⏮/◀◀ ▶▶/⏭)
㉒	▶/❚❚/∧ button (▶/❚❚/∧)
㉓	Stop button (■)
㉔	Volume buttons (– VOLUME +)

■ Demo Function A

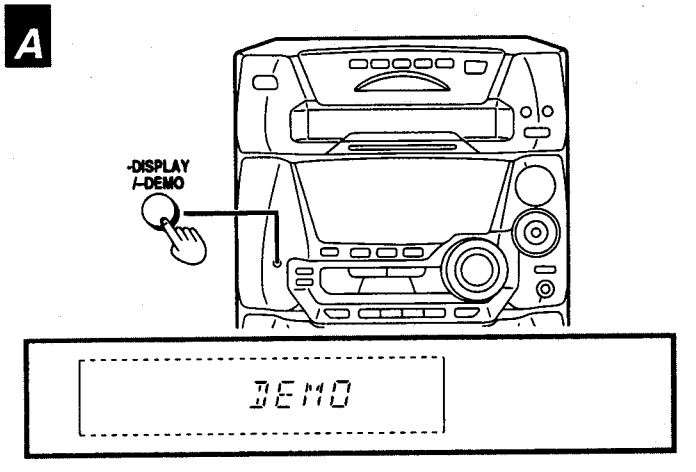
When the demo function is activated, a demonstration of the spectrum analyzer using space travel images is shown on the display panel.

Turning the demo function ON/OFF
Press POWER and hold down DISPLAY/DEMO.
Every time you hold down the button;

DEMO (ON)←——→NO DEMO (OFF)

When the demo function is ON, the demo is played automatically in the following cases.

- **When system is ON**
  If the input source is set to CD or tape, and the system is left on standby for more than 2 minutes
- **When system is OFF**
  If the clock has not been set



■ Setting the Time B

This is a 12-hour display clock.
This example in the figure shows how to set the time for 4:25 p.m.

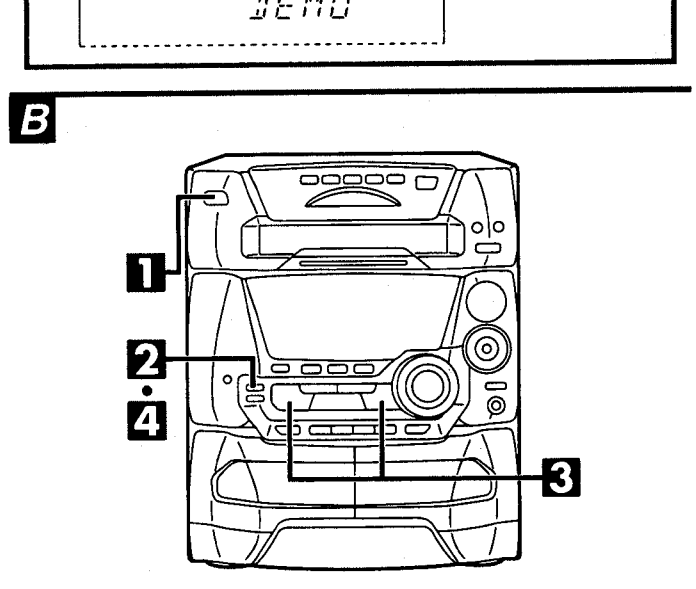
1 Switch on the power.

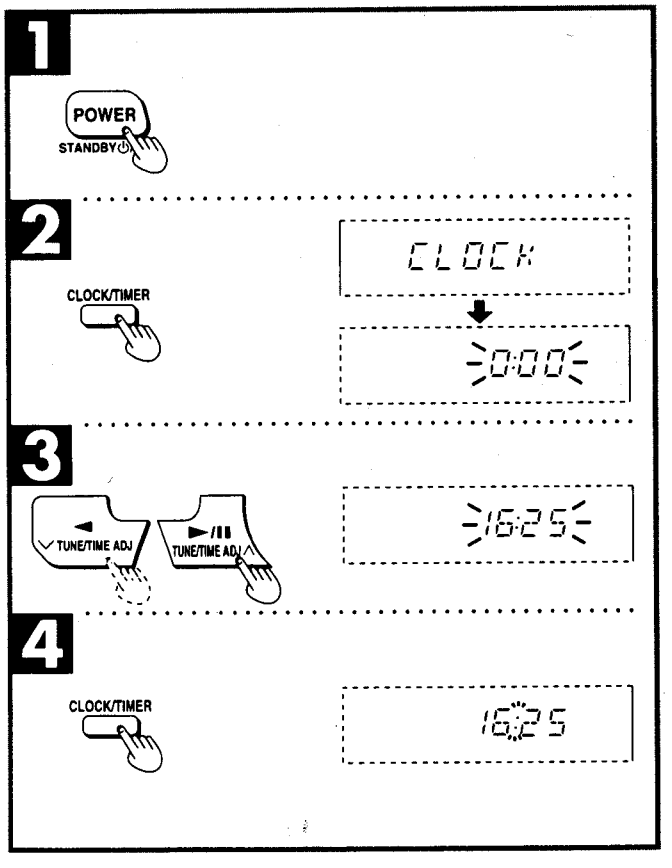
2 Press CLOCK/TIMER to select "CLOCK".
Every time you press the button;

CLOCK→ PLAY→ REC
↑——Previous display←——┘

3 (within 7 seconds or so)
Press ∨ or ∧ to show the present time.

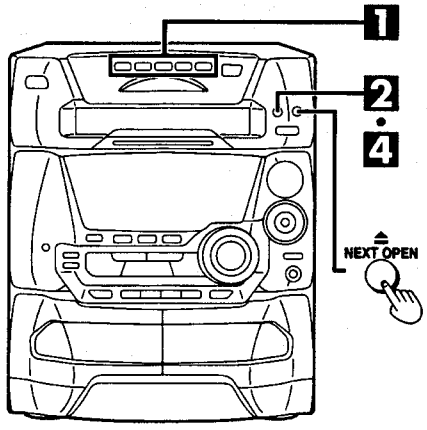
4 Press CLOCK/TIMER to finish setting the time.
The display will return to whatever was displayed before you set the time.

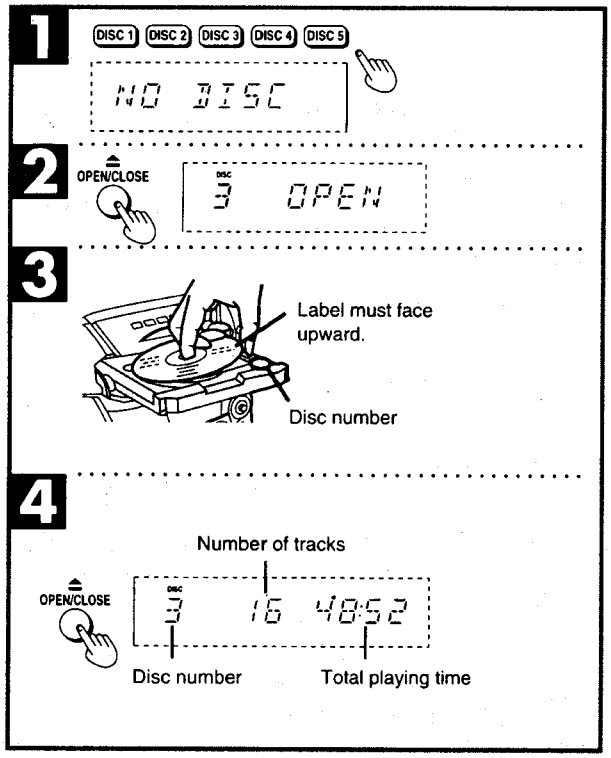


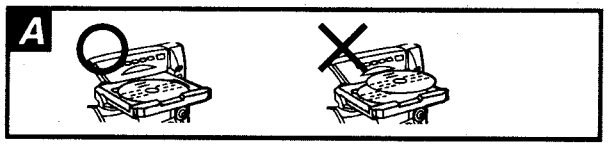


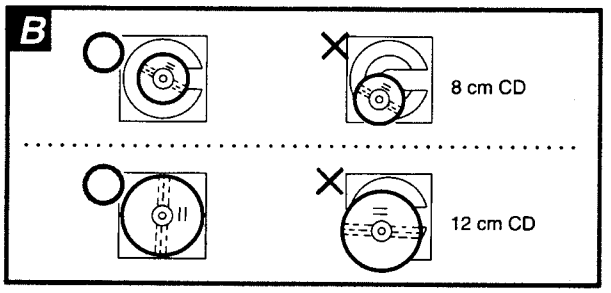
To display the time when power is ON
Press CLOCK/TIMER to select "CLOCK".
The time will be displayed for about 5 seconds and then the display will return to whatever was previously displayed.

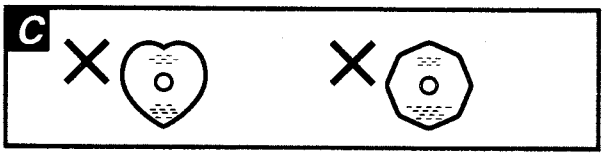
■ Listening to Compact Discs











Loading and checking CDs

Always stop the changer before loading or changing CDs. You cannot change CDs while a disc is playing.

How to load CDs

1 Press DISC 1–DISC 5, whichever you want to open.
The power will come on automatically.

2 Press ▲ OPEN/CLOSE.
The selected tray will open.

3 Set CD in the tray.

4 Press ▲ OPEN/CLOSE.
The tray will close and the disc No., number of tracks and total playing time will be shown on the display.

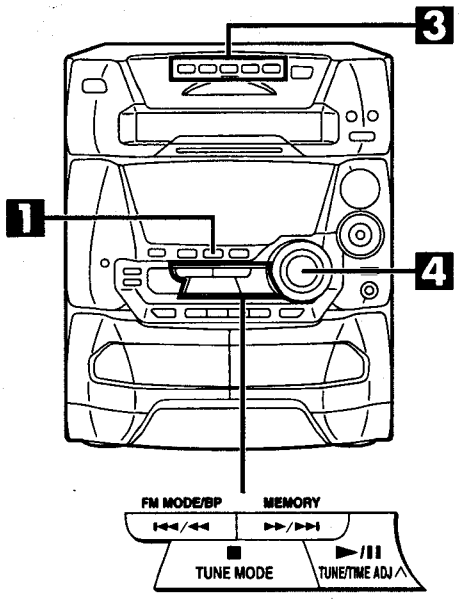
To load several CDs consecutively or to check which trays have discs
Press ▲ NEXT OPEN.
Every time you press the button, the next tray will open. After loading all the CDs you want, press ▲ OPEN/CLOSE close the trays.

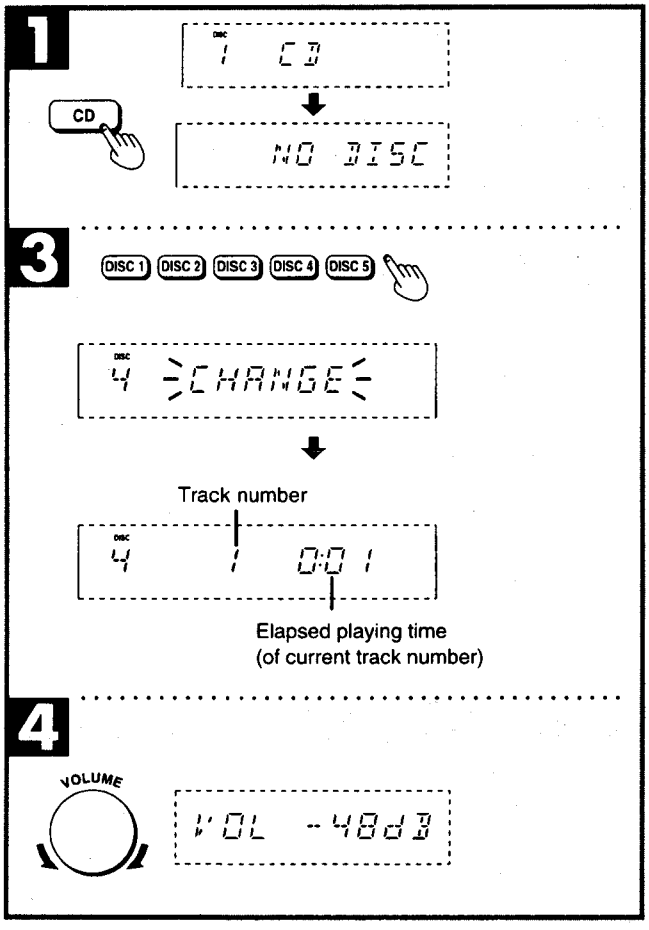
Disc indicators (DISC 1–DISC 5)

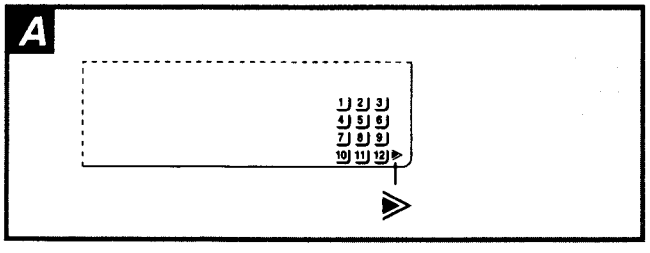
These indicate the selected tray (in the play position) regardless of whether a CD is on the tray or not.

To prevent damage

Always observe the following points.
- Load only 1 CD per tray. A
- Load CDs as shown in figure B.
  The adapter is not needed with 8 cm CDs (singles).
- Set the system on a flat, level surface.
  Do not set it on top of magazines, inclined surfaces, etc.
- Do not move the system while trays are opening/closing, or when loaded.
  Always unload all CDs and set the system to "shipping mode" before moving the system.
- Do not put anything except CDs in trays.
- Do not use cleaning CDs or CDs which are badly warped or cracked.
- Do not use CDs with poorly attached labels or stickers.
  Adhesive protruding from underneath stickers or left over from peeled off stickers can cause your stereo to malfunction.
- Do not use irregular shape CDs (heart-shape, octagonal, etc.). C







Sequential play

1 Press CD.
The power will come on automatically.

2 Insert CDs in the trays.

3 Press DISC 1–DISC 5 to select the disc you want.
(If the desired CD is indicated on the display panel, the same operation can be accomplished by pressing ▶/❚❚.)
Play will start from the first track on the selected disc, and will continue until the last track of the final disc is played (see below).

4 Adjust the volume level.

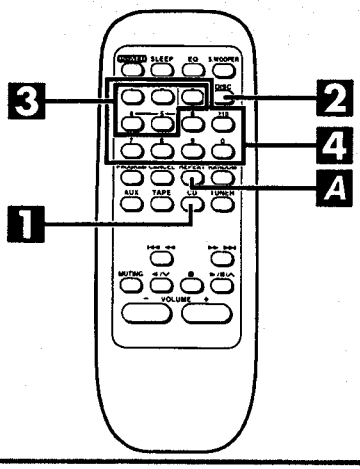
To stop the disc play
Press ■.

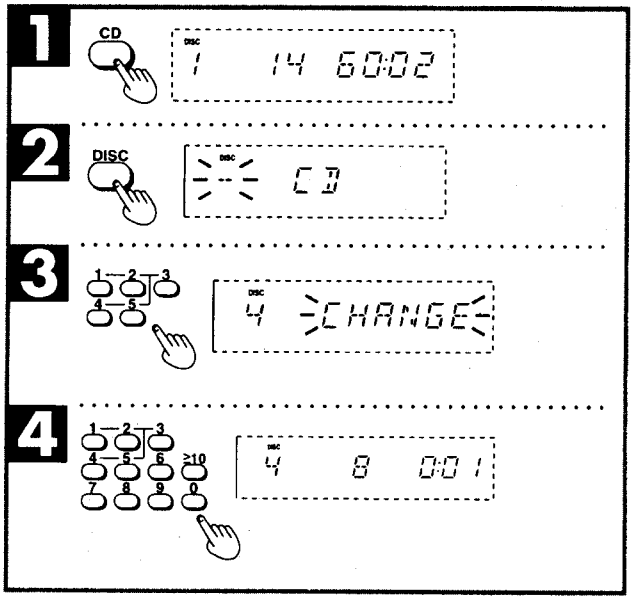
When " ≫ " appears on the display A
It indicates there are 13 or more tracks on the disc in the playing position.

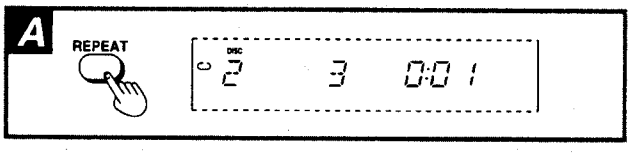
What is meant by "final disc"?
For example, if play starts from disc 4, disc 3 will be the "final disc".
Order of progression:
Disc 4→5→1→2→3

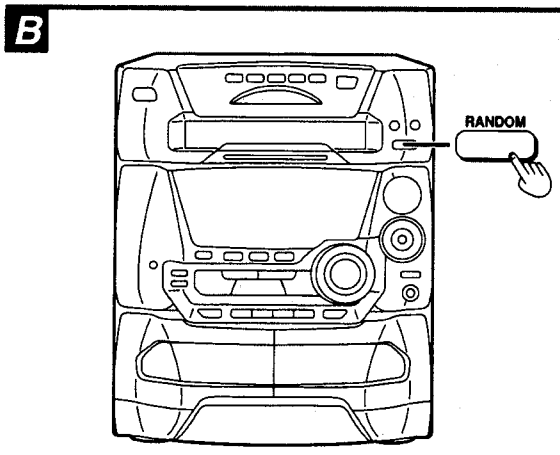
To pause	Press ▶/❚❚ during playback. To resume playback, press ▶/❚❚.
To search forward/ backward (Search)	Hold down ⏮/◀◀ (backward) or ▶▶/⏭ (forward) during playback or pause mode.
To skip forward/ backward	Press ⏮/◀◀ (backward) or ▶▶/⏭ (forward) during playback or pause mode.

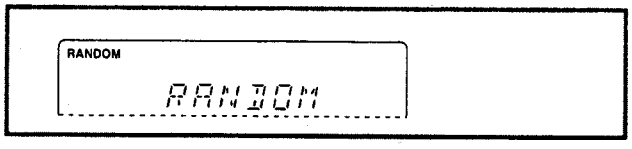
Note
- During random play , you cannot skip to tracks which have already been played.
- During program play or random play, you can search forward or backward only within the current track.
- During program play, skipping is always in the programmed order, whether forward or backward.











Direct access play

by remote control only

1 Press CD.

2 Press DISC.

3 (within 10 seconds or so)
Press 1–5 to select the disc you want.

4 Press the numeric button to select the desired track number.
The CD will be played from the selected track to the last track of the final disc.

To select a two-digit track
Press ≥10 and then the two numbers you want within 10 seconds or so.

For example
Track no. 20: ≥10→2→0
Track no. 35: ≥10→3→5

Repeat play

by remote control only

Press REPEAT before or during play. A
All tracks on the loaded CD are repeated.

To cancel repeat play
Press REPEAT once again.

To repeat your favorite tracks
1. Program the tracks you want.
2. Press REPEAT and make sure " ↻ " is displayed.
3. Press ▶/❚❚/∧. Playback will start.

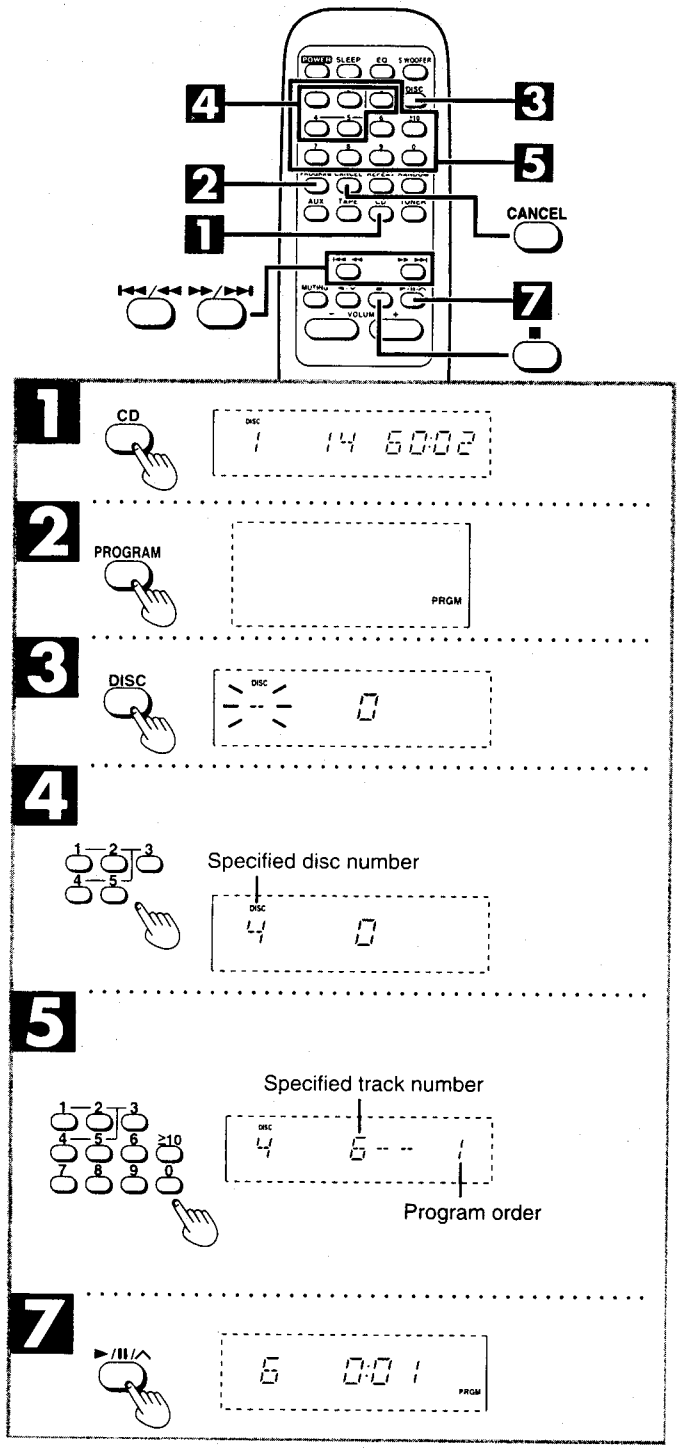
To repeat just one track
Set the 1-TRACK mode, press REPEAT before or during playback, and make sure " ↻ " is displayed.

Random play

Press RANDOM. B
All tracks on the loaded CDs will be played in random order. Playback will stop automatically when all tracks have been played.

To cancel random play
Press RANDOM once again.

Note
You can use random play with your program. Only the programmed tracks will be played, but in random order.



Program play

by remote control only

You can program up to 24 tracks.

1 Press CD.
Ensure CD is stopped.

2 Press PROGRAM.

3 Press DISC.

4 (Within 10 seconds or so)
Press 1–5 to select the disc you want.

5 Press the numeric button to select the desired track.

6 Repeat steps 3 through 5 until you have programmed all the tracks you want.

7 Press ▶/❚❚/∧.
Play will start in the programmed sequence.

To cancel program play mode
Press PROGRAM in the stop mode.
Programmed contents will be saved in memory.
Pressing ■ will cancel program play, but it will also erase the entire program.

To select a two-digit track
Press ≥10 and then the two numbers you want.

When "CD FULL" appears A
The number of programmed tracks is limited to 24. No further tracks can be programmed.

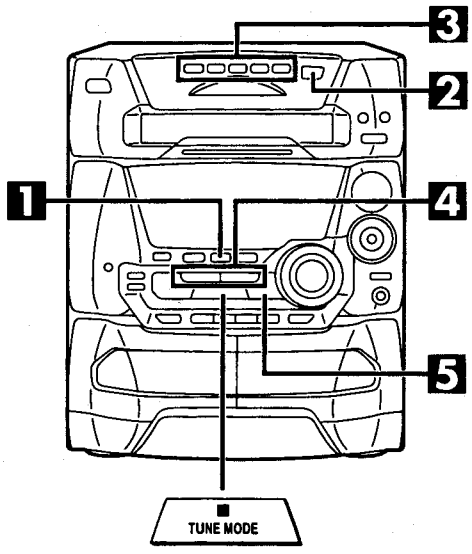
You can do the following during program mode B
- Check program contents.
  Press ⏮/◀◀ or ▶▶/⏭.
  Everytime you press one of the buttons, the track and program No. are shown on the display.
- Add to the program.
  Repeat steps 3 through 5.
- Cancel entries.

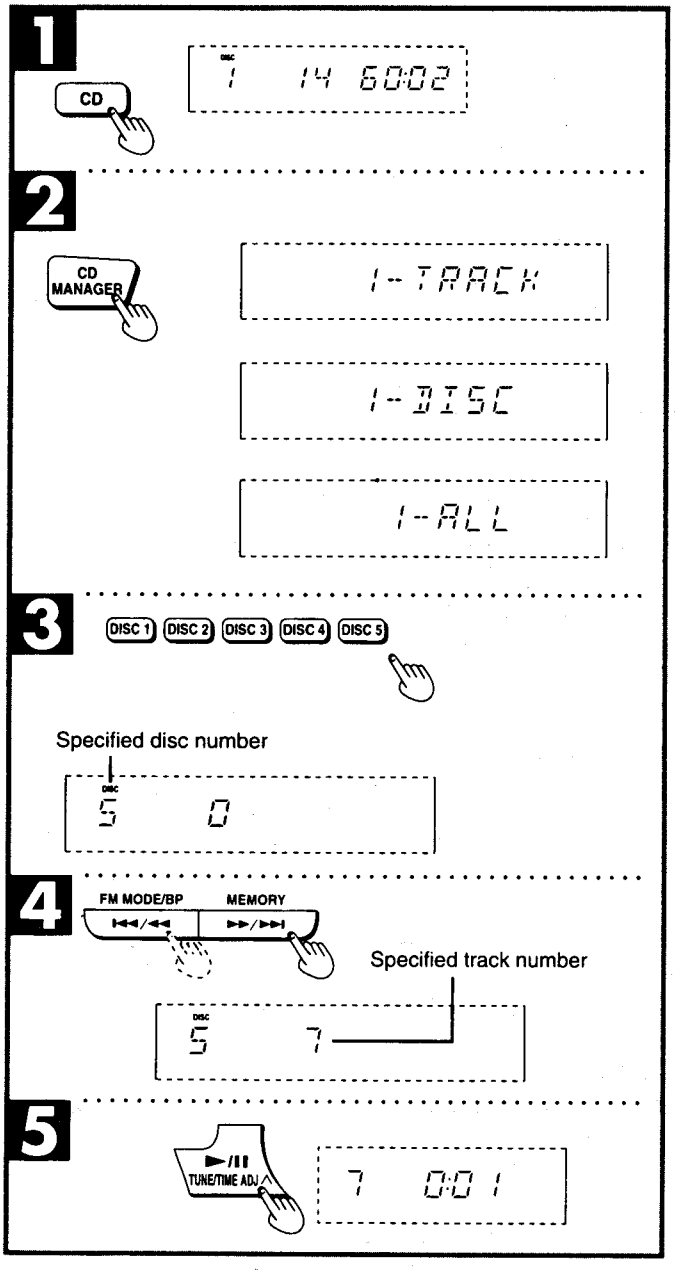
From the last programmed track	Press CANCEL.
A specified track only	Select the track with ⏮/◀◀ or ▶▶/⏭, and press CANCEL within 3 seconds.
All tracks	Press ■.

Memory retention
Your program is retained in memory for about 2 weeks while the system is unplugged.

To replay your program
If you turned OFF your program with PROGRAM, you can play it again as explained below.
1. Press PROGRAM.
2. Press ▶/❚❚/∧.

If you program a track not on your CDs
The track is initially programmed, but during program play, the player will skip that track and will continue playing from the next programmed item.





To listen to special CDs and tracks (CD Manager function)

This function makes it easier for you to select special CDs and tracks from amongst those loaded in the player.

You can use this function to make recordings as well.

There are 3 CD/track selection modes.

- For playing back 1 track only from all loaded CDs
  1-Track mode (1-TRACK)
- For playing back 1 CD only from all loaded CDs
  1-Disc mode (1-DISC)
- For playing back 1 track on all loaded CDs
  1-Track All-Disc mode (1-ALL)

1 Press CD.

Ensure CD is stopped.

2 Press CD MANAGER to select the desired mode.

Every time you press the button;

1-TRACK→1-DISC→1-ALL
↑——NORMAL←——┘
(OFF)

1-TRACK: Only one particular track is played.
1-DISC: The tracks on only one particular disc are played.
1-ALL: The same track numbers on each of the CDs are played in succession.
(NORMAL: The original display is restored in about 3 seconds.)

3 Press DISC 1–DISC 5 to select the disc you want.

Note

This step is not required if 1-ALL was selected in step 2.

4 Press ⏮/◀◀ or ▶▶/⏭ to select the desired track.

Note

This step is not required if 1-DISC was selected in step 2.

5 Press ▶/❚❚.

The selected track will start.

To stop play

Press ■.

When playback ends

"NORMAL" will appear on the display for about 3 seconds, then the CD MANAGER function will turn OFF automatically.

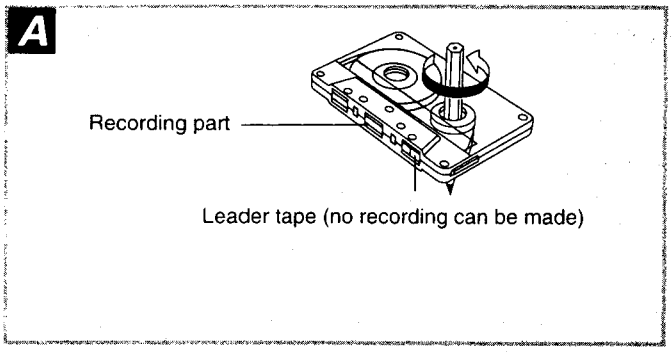
During play in the 1-ALL mode:

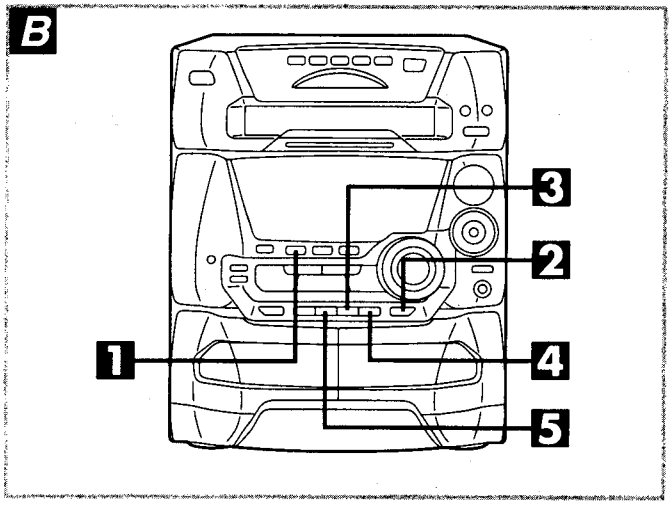
- It is not possible to skip back to a CD whose track has already been played.
- If a CD does not have the designated track number, it is skipped and play continues.

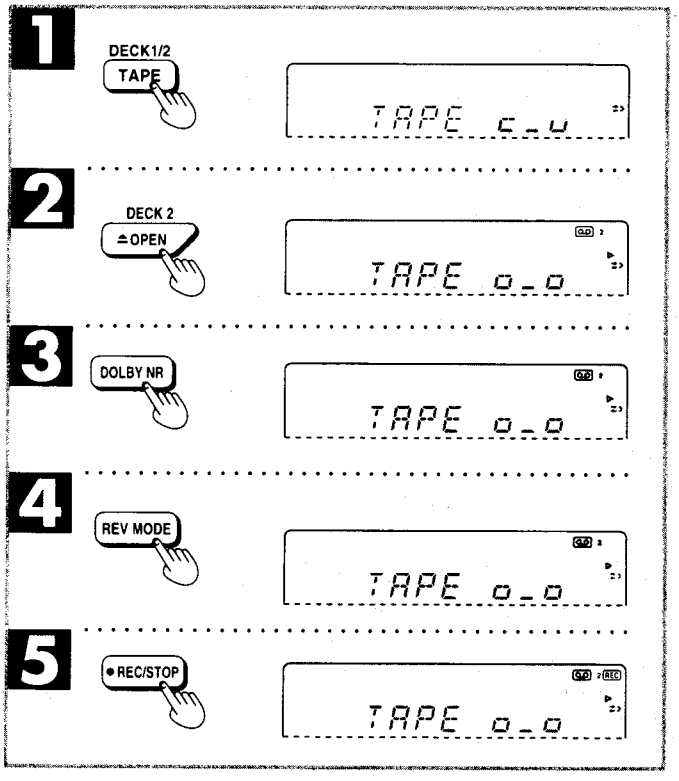
Note

You can use the repeat function and random play at the same time. However, only the repeat function is available for 1-TRACK mode.

■ Before Recording (Deck 2 only)







Types of tapes which can be recorded correctly

The unit automatically identifies the type of tape.

NORMAL POSITION/TYPE I	○
HIGH POSITION/TYPE II	○
METAL POSITION/TYPE IV	×

This system cannot make a recording or erasing correctly, if metal position tapes are used.

To record from the beginning of the tape A

You cannot record on the leader part of the tape. Before recording, wind the tape past the leader to a point where recording can start immediately.

How volume, sound quality/field and super woofer effect recording

The tape you are recording is not effected whatsoever by changes in volume, sound quality/field or super woofer.

- In recording, sound quality/field are set automatically to "FLAT".
- You can change volume and super woofer effect for the playback sound.

To erase a recorded sound B

1 Press TAPE.

2 Insert the recorded tape into deck 2.

3 Press DOLBY NR so that the Dolby NR indicator goes off.

4 Press REV MODE to select reverse mode.

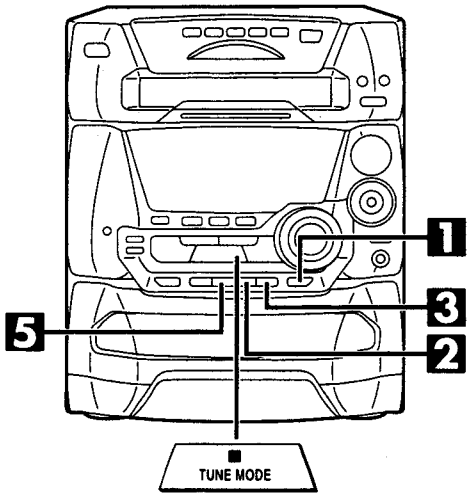
5 Press ● REC/STOP.

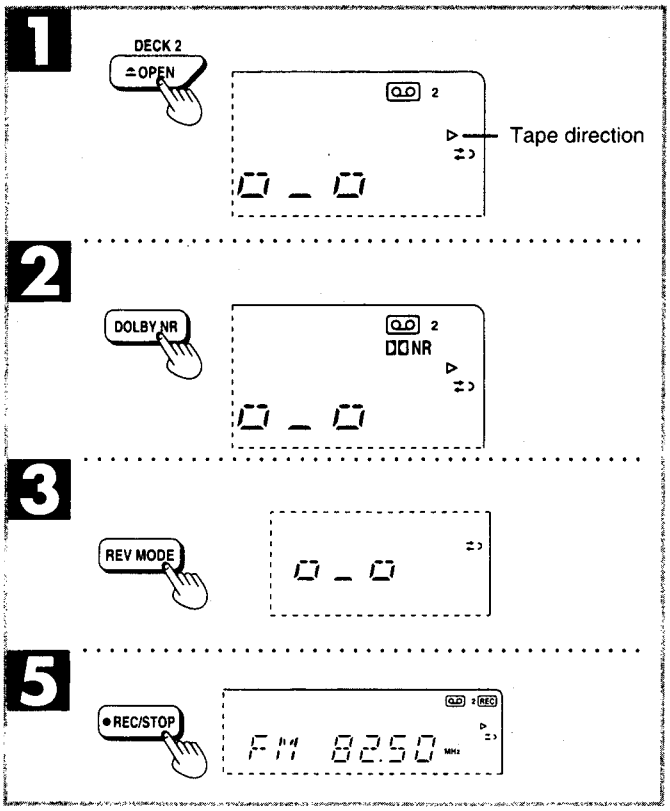
Note

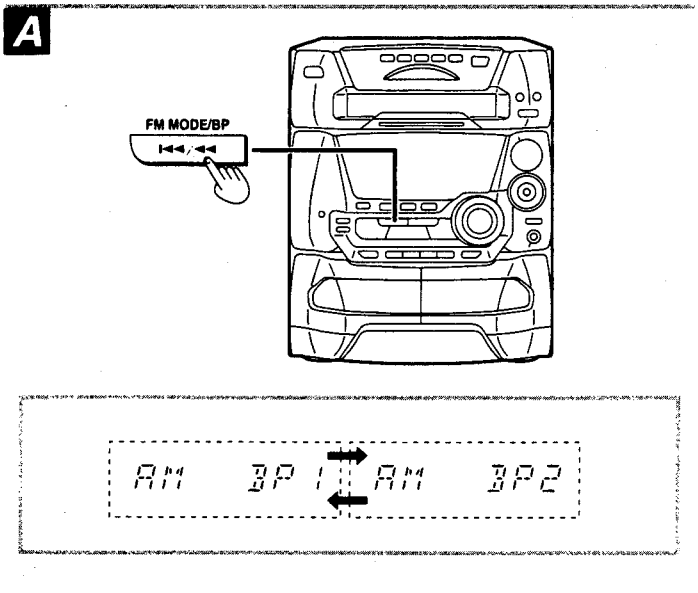
- You cannot open deck 1 while recording.
- You cannot fast-forward or rewind one deck while recording with the other.

Your attention is drawn to the fact that recording pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

■ Recording from Radio Broadcasts







1 Press DECK 2 ≙ OPEN, and then insert the tape.

Close the holder by hand.
Tape direction is automatically set to "▶".

2 Press DOLBY NR.

You have to turn Dolby NR ON/OFF according to the type of recording you want to make.
Every time you press the button: DOLBY NR→(OFF)

3 Press REV MODE to select the reverse mode.

Every time you press the button;

: One side is recorded, then recording stops automatically.
, : Both sides (front side→reverse side) are recorded, then recording stops automatically.

4 Select a radio station.

5 Press ● REC/STOP to start recording.

If you selected in step 3, the direction will automatically change to when recording starts.

To stop recording

Press ● REC/STOP again.
Recording can also be stopped by pressing ■.

To start recording on the reverse side

Load a tape and change the tape direction as following.

1. Press TAPE DECK 1/2 and select tape deck 2.
2. Press ◀ and immediately thereafter ■. The tape direction will be shown as "◀".

To record from a specific point on a tape

Before recording, advance the tape to the point from where you want to start recording.

To cut an unnecessary part while recording

1. Press ● REC/STOP during the unnecessary part. The cassette deck will go into the stop mode.
2. Press ● REC/STOP to resume recording again. Recording will continue in the same direction as before.

Note

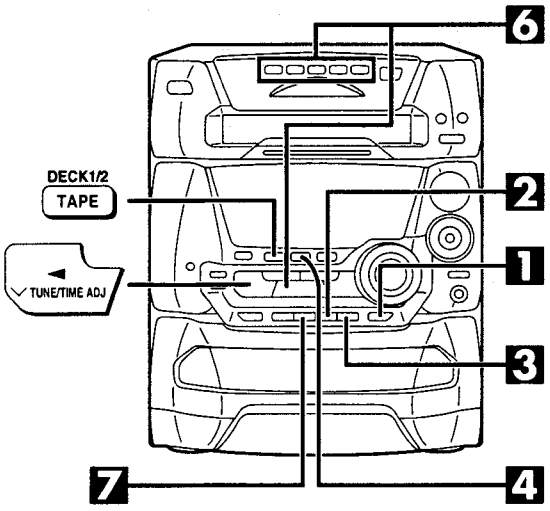
When recording an AM broadcast, volume is momentarily interrupted when you start and stop the recording.

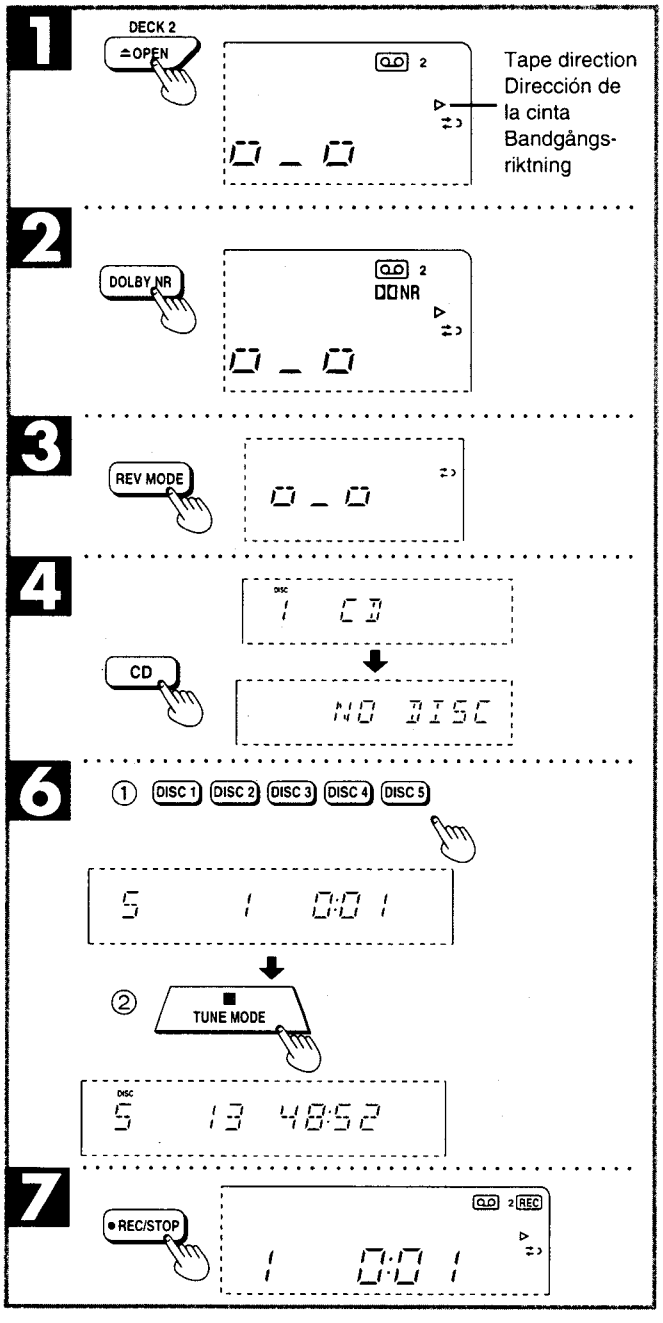
To reduce noise while AM recording (Beat proof function) A

Press FM MODE/BP while recording.

Each time you press the button, "BP 1" and "BP 2" will be displayed alternately.
Select the position where there is less noise.

■ Recording from Compact D iscs





1 Press DECK 2 ▲ OPEN, and then insert the tape.
Close the holder by hand.
Tape direction is automatically set to "▶".

2 Press DOLBY NR.
You have to turn Dolby NR ON/OFF according to the type of recording you want to make.
Every time you press the button: DD NR→(OFF)

3 Press REV MODE to select the reverse mode.
Every time you press the button;
⇄→⇄→⇄

⇄: One side is recorded, then recording stops automatically.
⇄, ⇄: Both sides (front side→reverse side) are recorded, then recording stops automatically.

4 Press CD.

5 Load CDs into each of the trays.
(See page 22.)

6 Press DISC 1–DISC 5 to select the disc you want.
Pressing ■ will stop playback.

7 Press ● REC/STOP to start recording.
- If you selected ⇄ in step 3, the direction will automatically change to ⇄ when recording starts.
- The recording will proceed from the first track on the selected CD and will continue on through the last track of the final disc.
- The tape deck stops automatically when the CD is finished.

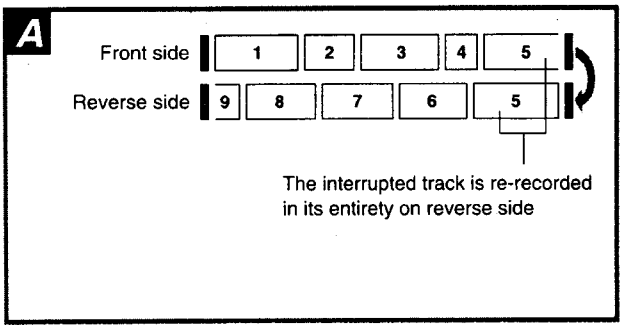
To stop recording
- To add a 4 second silent interval before stopping
  Press ■. The CD will stop automatically too.
- To stop recording without a silent interval
  Press ● REC/STOP. The CD will stop automatically too.

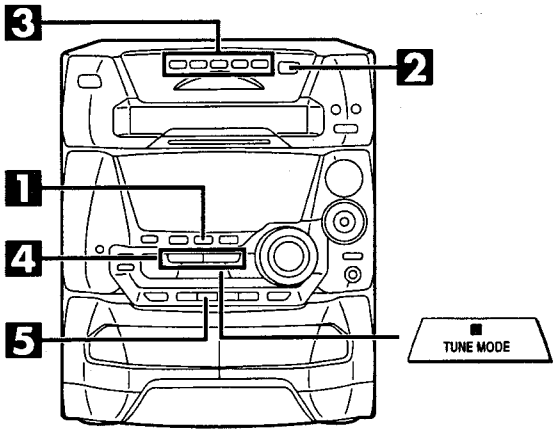
To start recording on the reverse side
Load a tape and change the tape direction as following.
1. Press TAPE DECK 1/2 and select tape deck 2.
2. Press ◀ and immediately thereafter ■. The tape direction will be shown as "◀".

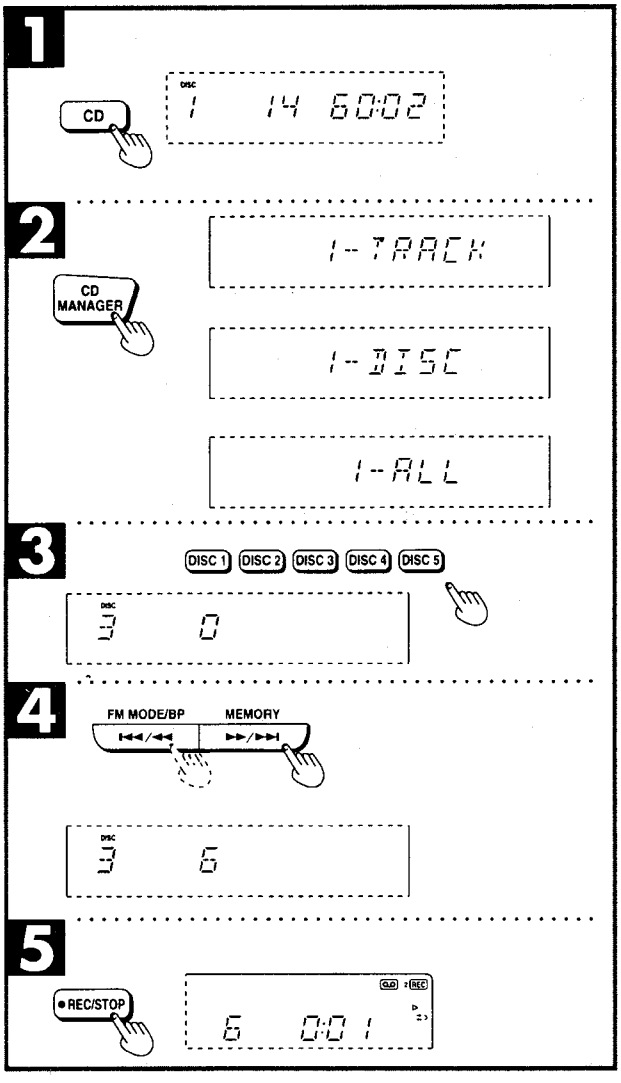
To record from a specific point on a tape
Before recording, advance the tape to the point from where you want to start recording.

To record programmed tracks

1. After step 5, program the track you want.
2. Press ● REC/STOP to start recording.







To record special CDs and tracks (CD Manager function)

This function makes it easier for you to select special CDs and tracks from amongst those loaded in the player.

- While recording, if a track is cut off in the middle at the end of the front side, it is re-recorded from the beginning, on the reverse side. A
- At the end of the reverse side recording stops and the current track will be interrupted.

Before recording

Prepare the tape you want to use.

1 Press CD.

2 Press CD MANAGER to select the desired mode.

Every time you press the button;

1-TRACK→1-DISC→1-ALL
↑——NORMAL←——┘
(OFF)

1-TRACK: Only one particular track is recorded.
1-DISC: The tracks on only one particular disc are recorded.
1-ALL: The same track numbers on each of the CDs are recorded in succession.
(NORMAL: The original display is restored in about 3 seconds.)

3 Press DISC 1–DISC 5 to select the disc you want.

Note

This step is not required if 1-All was selected in step 2.

4 Press ⏮/◀◀ or ▶▶/⏭ to select the desired track.

Note

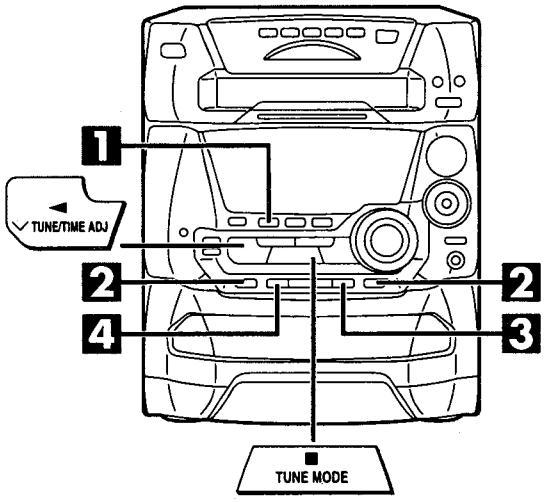
This step is not required if 1-DISC was selected in step 2.

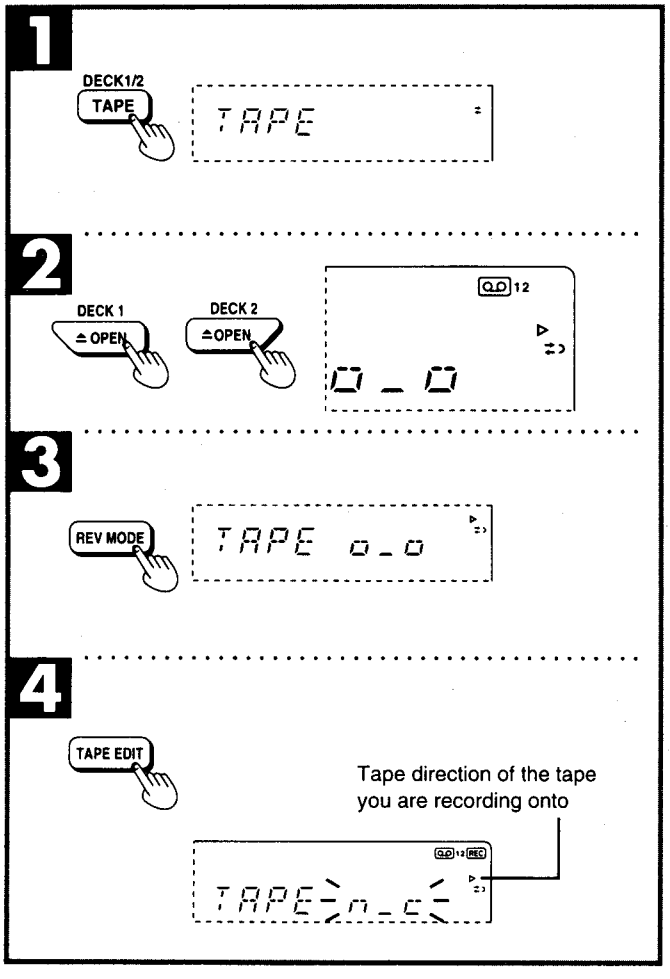
5 Press ● REC/STOP to start recording.

To stop recording

- To add a 4 second silent interval before stopping
  Press ■. The CD will automatically stop too.
- To stop recording without a silent interval
  Press ● REC/STOP. The CD will stop automatically too.

■ Tape-to-tape Recording





The recording level and the Dolby effect will be recorded as they are on the tape being played back.

1 Press TAPE.

2 Press ≙ OPEN on both decks and insert the tapes.

For playback: Into deck 1
For recording: Into deck 2
Close the holders by hand.
Tape direction is automatically set to "▶".

3 Press REV MODE to select the reverse mode.

Every time you press the button;

⇄ → ⇄ → ⇄

⇄: One side is recorded, then recording stops automatically.

⇄, ⇄: Both sides (front side→reverse side) are recorded, then recording stops automatically.

4 Press TAPE EDIT to start recording.

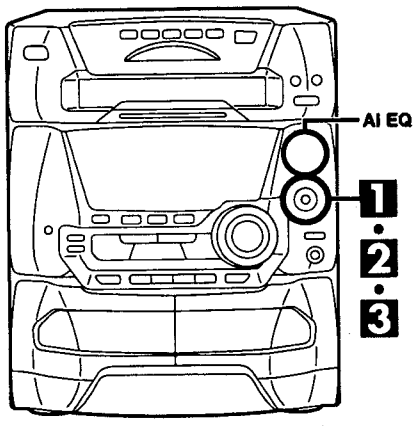
- If you selected ⇄ in step 3, the direction will automatically change to ⇄ when recording starts.

To stop recording:
Press ■.
Both decks will stop.

To start recording on the reverse side
Load a tape and change the tape direction as following.
1. Press TAPE DECK 1/2 and select tape deck 2.
2. Press ◀ and immediately thereafter ■. The tape direction will be shown as "◀".

To record from a specific point on a tape
Before recording, advance the tape to the point from where you want to start recording.

■ Varying the Sound Quality with the Acoustic Image (AI) Equalizer



The AI equalizer uses the SOFT, SHARP, HEAVY and LIGHT sound quality coordinates to achieve subtle sound quality settings with ease.

1 Press SOUND EQ joystick to turn on the equalizer.

The SOUND EQ lamp lights more brightly, and "FLAT" is cleared.

2 Dial SOUND EQ to display "AI EQ."

When it is turned clockwise, the settings are selected in the following sequence.

① HEAVY
② CLEAR
③ SOFT
④ DISCO
⑤ LIVE
⑥ HALL
⑦ MANUAL
⑧ **AI EQ**

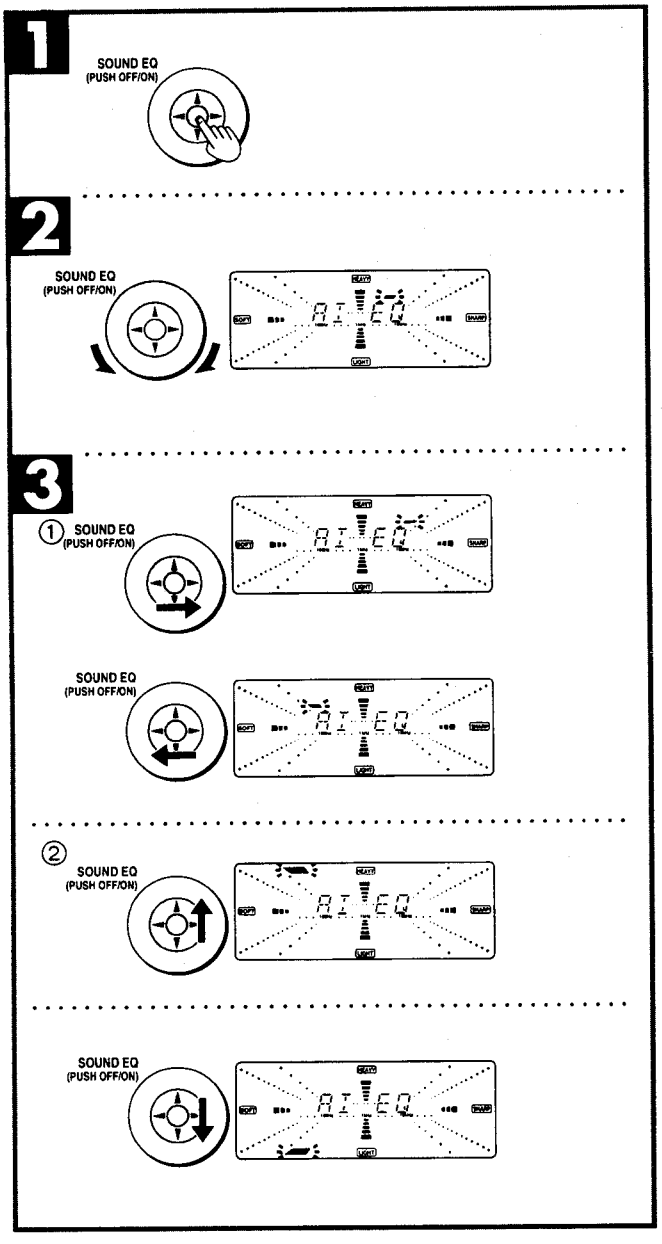
3 Operate SOUND EQ joystick and set the sound quality as desired.

① ← → direction: SOFT–SHARP setting
② ↓ ↑ direction: HEAVY–LIGHT setting

Repeat steps ① and ② to set the desired sound quality.

The original display is restored on the display panel in about 5 seconds. Only one AI EQ lamp lights to give a rough indication of the coordinate position.

The sound quality can be re-selected using SOUND EQ while the lamp is lighted.



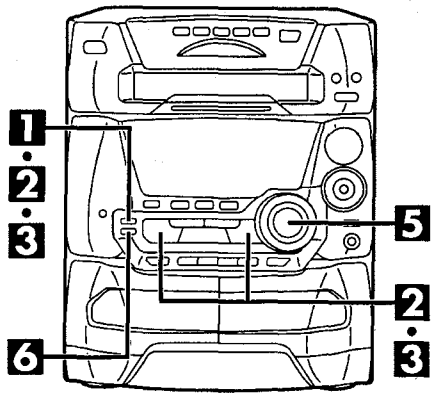
To release the equalizer

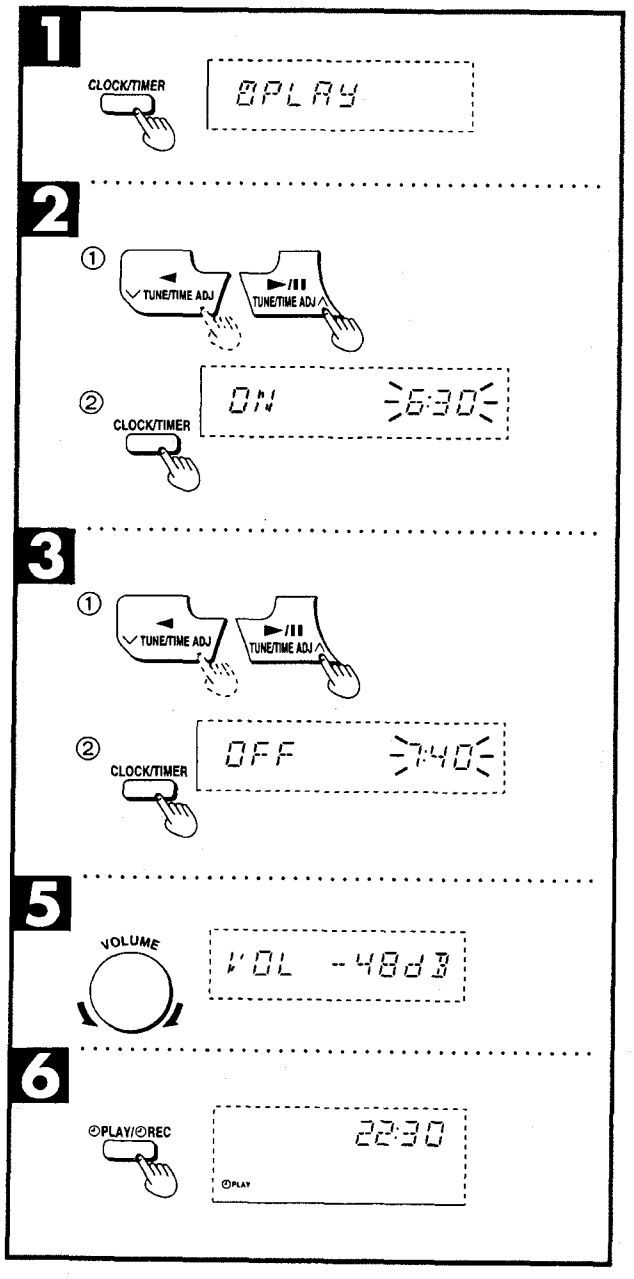
Press SOUND EQ joystick so that "FLAT" is displayed.

Note

- The sound quality setting is stored automatically. It is recalled when "AI EQ" is next selected.
- All recordings are performed at the flat setting even if an alternative sound quality setting has been selected.

■ Using the Timer





Using the play timer

Select this timer when you want to use the timer as an alarm clock. You can wake up listening to music (CD, tuner, tape or aux) at a desired volume level and time.

Preparations

- *Make sure that you have completed "Setting the time".*
- Switch on the power.

The figure shows how to set the play timer to play a CD from 6:30 to 7:40.

1 Press CLOCK/TIMER to select "◴ PLAY".

Every time you press the button;

CLOCK→◴ PLAY→◴ REC
↑—Previous display←┘

2 "ON" time setting

(Within 8 seconds or so)

① Press ∨ or ∧ to select the starting time.
② Press CLOCK/TIMER.

3 "OFF" time setting

① Press ∨ or ∧ to select the ending time.
② Press CLOCK/TIMER.

4 Source selection

Select the desired source and then prepare for playing.

To play CD(s)
Press CD and insert CD(s).
If more than 1 CD is loaded
Press DISC 1–DISC 5 to select the CD you want to hear first, and press ■.

Note
Disc selection does not become part of the timer memory.

To play tape(s)
Press TAPE and insert tape(s).
If tapes are loaded in both decks, playback will start from deck 2.

To play the radio
Press TUNER and tune in the desired station.

To play a unit connected to the "AUX" terminals
Press AUX.

5 Play volume setting

Set the playback volume.

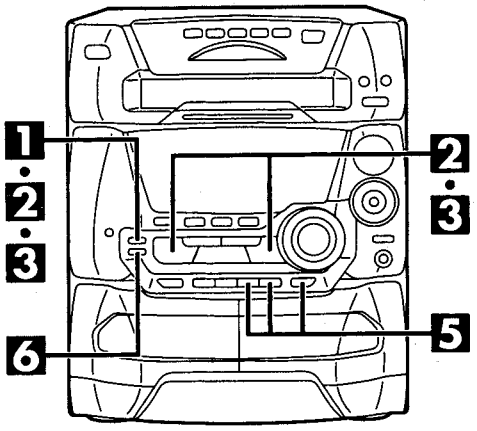
6 Press ◴ PLAY/◴ REC to select "◴ PLAY".

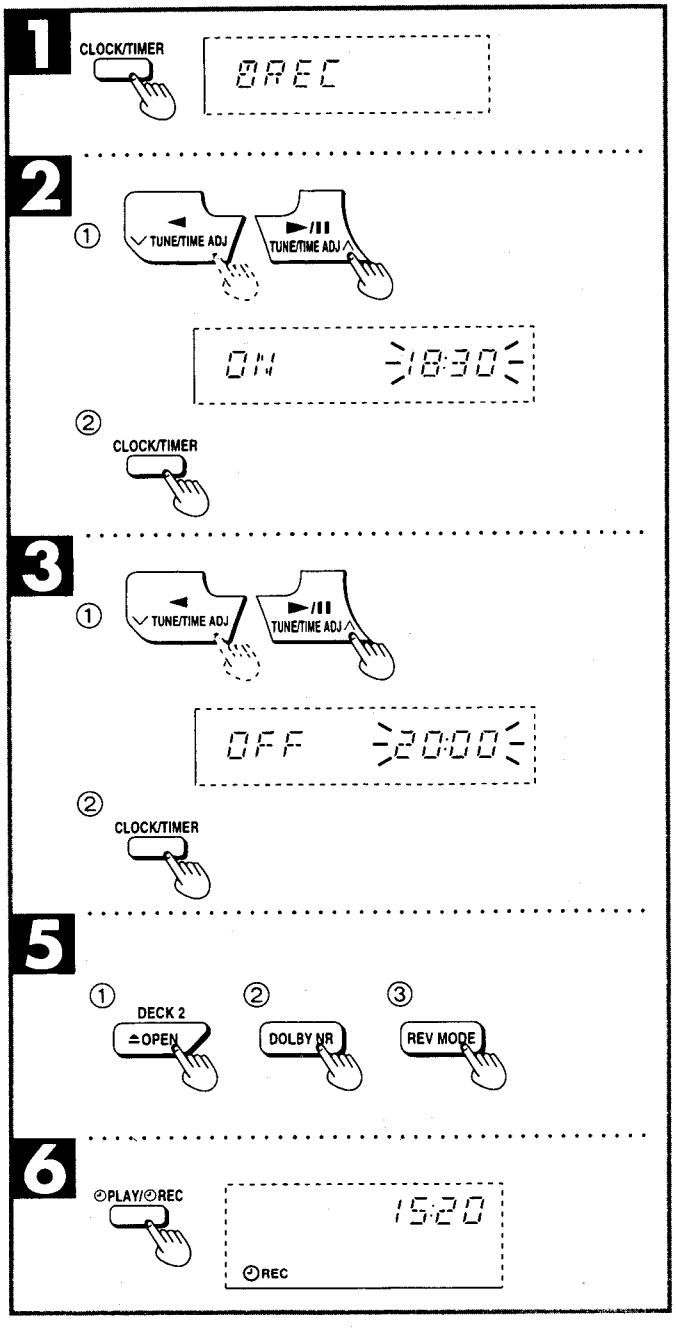
Every time you press the button;

◴ PLAY——→◴ REC
↑—Out (OFF)←┘

Power will shut OFF automatically in a few seconds.

The timer play will start at the preset time with volume increasing gradually up to the volume level you preset.





Using the record timer

Select this timer when you want to use the timer to record a midnight program or while you are out.

Preparations

- Make sure that you have completed "Setting the time".
- Switch on the power.

Set the timer at least 2 minutes before you want to start recording.

The figure shows how to set the record timer for recording FM broadcasts from 18:30 to 20:00.

1 Press CLOCK/TIMER to select "⏲ REC".

Every time you press the button;

CLOCK→⏲ PLAY→⏲ REC
↑——Previous display←┘

2 "ON" time setting

(Within 8 seconds or so)

① Press ∨ or ∧ to select the starting time.
② Press CLOCK/TIMER.

3 "OFF" time setting

① Press ∨ or ∧ to select the ending time.
② Press CLOCK/TIMER.

4 Source selection

Select the desired source and then prepare for recording.

To record from the radio
Press TUNER to select the band and tune in the desired station.
To record from a unit connected to the "AUX" terminals
Press AUX.

5 Prepare for recording.

1. Insert a tape into deck 2 with the side on which the recording will start facing you.
2. Select Dolby NR.
3. Select the reverse mode.

Note

Dolby NR and reverse mode do not become part of the timer memory.

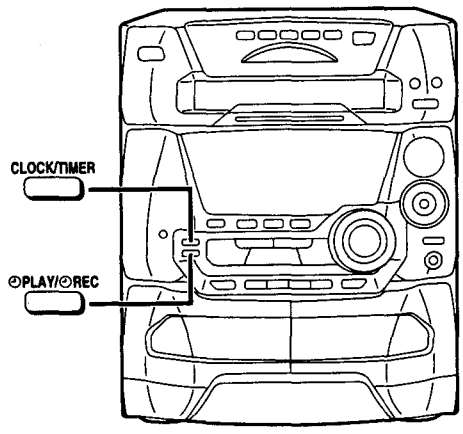
6 Press ⏲ PLAY/⏲ REC to select "⏲ REC".

Every time you press the button;

⏲ PLAY——→⏲ REC
↑——(OFF)←┘

Power will shut OFF automatically in a few seconds.

About 30 seconds before the set time, the stereo mutes all sound automatically.



Using the play/record timer

To switch the timer OFF
Press PLAY/REC and check "PLAY" (for play timer) or "REC" (for record timer) goes out.

If you set the timer incorrectly
Repeat the procedure from step 1.

To check settings
Press CLOCK/TIMER to select "PLAY" (for play timer) or "REC" (for record timer).
Two seconds later, the display will change in the following order.
- For play timer
  ① Play start time
  ② Play end time
  ③ Play source and playback volume

- For record timer
  ① Recording start time
  ② Recording end time
  ③ Recording source

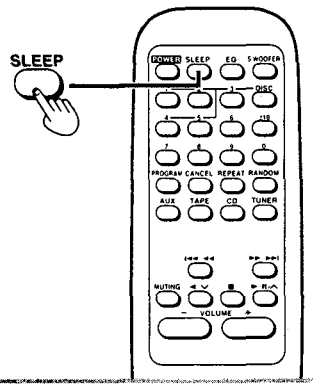
You can check the settings even when the system is OFF.

To enjoy the desired source after the timer setting is completed
The volume level and music source are stored in the timer memory and the timer will start in these preset conditions. However, the Disc numbers and reverse mode do not get stored in the timer memory.
1. After step 6, turn on the power and start playing the desired source.
2. Reset the Disc number and reverse mode if you have changed any of them, confirm that a Disc or cassettes is inserted, then press POWER to put the unit on standby.

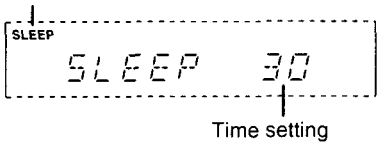
Turning the timer ON/OFF
As long as "PLAY" or "REC" is displayed, the timer will come ON everyday as set.
You can turn the timer ON/OFF by pressing PLAY/REC while the system is OFF.
Remember that when "PLAY" or "REC" is displayed, the timer is ON. When not displayed, the timer is OFF.

Note
- If the power is on, the timer will not function. The system must be in the standby mode.
- If you switch the power to the standby mode while the play/record timer is functioning, the OFF time setting will not be activated.
- If AUX is selected as the source, when the timer comes ON, the system will turn ON and will engage "AUX" as the source. If you want to playback or record from a connected component, set the component's timer to the same time. (See the instruction manual that came with the component.)
- The play timer cannot be used in combination with the record timer.

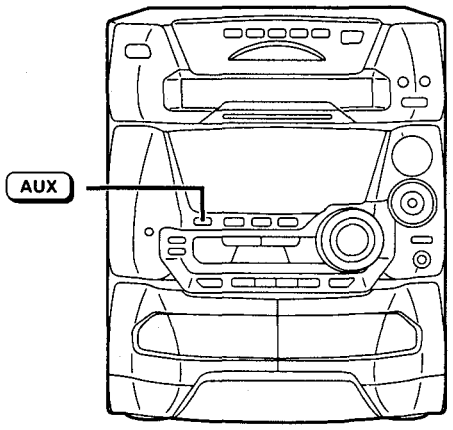
A



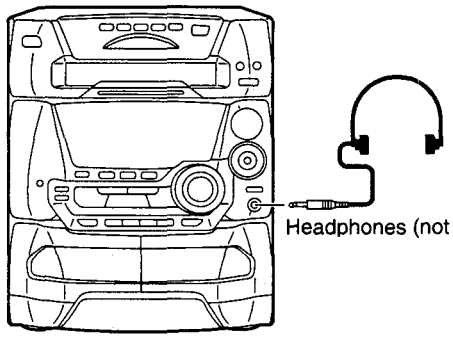
Check "SLEEP" is displayed.



B



C



Using the sleep timer A

This timer turns power to your system OFF at the set time (Max. 2 hours, settable at 30 minutes mark). It lets you fall asleep listening to music.

by remote control only

Preparations

- Make sure that you have completed "Setting the time".
- Switch on the power.

While enjoying the desired source:
Press SLEEP to select the desired time.

Every time you press the button;

→30→60→90→120→OFF

The system is turned off after the set time has elapsed.

To cancel the sleep timer:
Press SLEEP to select "OFF".

To confirm the remaining time:
(only while power is ON)
Press SLEEP.

To change the time remaining during operation:
Press SLEEP to show the remaining time then press SLEEP to select the desired time.

Note

- The sleep timer turns OFF automatically the moment you attempt to edit-record a CD using CD Manager function.
- The sleep timer can be used in combination with the play/record timer.
  The sleep timer always has priority.
  Be sure not to overlap timer settings.

■ Using an external unit B

Listening to an external source

1. Press AUX.
   The power will come on automatically.
2. Start playback from the external source. (For details, refer to the owner's manual of the equipment.)

Recording from an external source

1. Follow steps 1–3.
2. Press AUX.
3. Press ● REC/STOP (recording starts).
4. Start playback from the external source. (For details, refer to the owner's manual of the equipment.)

Listening with headphones C

Reduce the volume level, and connect the headphones.
Plug type: 3.5 mm stereo

Note

Avoid listening for prolonged periods of time to prevent hearing damage.

■ Self-Diagnostic Function

This system is equipped with a self-diagnostic function that displays an error code indicating the type of error in the event of an operating fault. This feature is useful when determining the cause of a problem during servicing.

Display Method

Tapes Used

- One side (A or B) of a blank tape with the erasure prevention tab removed is used (the tape should be advanced to about the middle of the tape).
- In addition, another tape containing music on both sides with the erasure prevention tab in place is used (the tape should be advanced to about the middle of the tape and there should be at least four seconds between selections).

Switching to Self-Diagnostic Mode

1. Press the Tape/deck select button (TAPE) with no tapes loaded in DECK 1 or DECK 2. (The power will come on automatically.)
2. Press the STOP button (■) for at least two seconds, and while still pressing the STOP button, press the FF button (►►/►►I) simultaneously for at least two seconds. A "T" will appear on the display.

Invoking the Self-Diagnostic Display

Cassette Unit (H01, H02, H03, F01, F02)

1. Press the Tape/deck select button (TAPE) and select DECK 2.
2. Install a blank tape with one erasure prevention tab removed in DECK 2 so that the side with the missing erasure prevention tab is on the right. Then close the cassette holder.
3. Press the FF button (►►/►►I). The tape deck will fast forward for about two seconds and then stop automatically.
4. Turn the tape over and close the cassette holder.
5. Press the rewind button (I◄◄/◄◄). The cassette deck will rewind for about two seconds and then stop automatically.
6. Replace the tape in DECK 2 with a music tape whose erasure prevention tabs are in place on both sides, then close the cassette holder.
7. Press the playback button (►). The cassette deck will perform the TPS operation and then stop automatically.
8. Press the REC button (●). (Recording does not commence.)
9. Remove the tape from DECK 2.
10. Press the Tape/deck select button (TAPE) and select DECK 1.
11. Repeat steps 2 through 7 above for the tape in DECK 1.
12. Use the Tape/deck select button (TAPE) to select the deck to be checked for faults and then press the stop button (■) . If there is a fault on the tape, the appropriate code is indicated on the display. When more than one fault is detected, the additional codes are displayed each time the stop button (■) is pressed (e.g., H02 → H03 → F01). If there are no detected faults, the letter "T" will remain on the display even if the stop button (■) is pressed.

CD Unit (F15, F16, F25-F28, F75)

1. Press the CD button (CD).
2. Press the disc check open button (▲ NEXT OPEN) and open and close the disc tray in sequence from disc 1 to disc 5.
3. Press the disc tray open/close button (▲ OPEN/CLOSE) and close the disc tray.
4. Press the stop button (■) . If there is an abnormality on the disc, it is displayed on the display. When there is more than one abnormality, the display changes each time the stop button (■) is pressed (e.g., F15 → F25 → F26). If there are no faults detected, the letter "T" will remain on the display even if the stop button (■) is pressed.

Power IC Unit (F61)

- F61 is displayed automatically in the event a fault is detected.

Canceling the Self-Diagnostic Mode

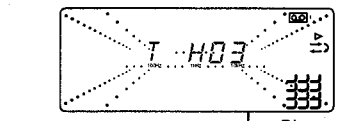
- Provided F61 is not displayed, the self-diagnostic mode can be canceled by pressing the power button (POWER) to turn the system off and then pressing the power button (POWER) again to turn it back on.
- When F61 is displayed, the F61 indication will remain until the cause of the problem has been resolved.

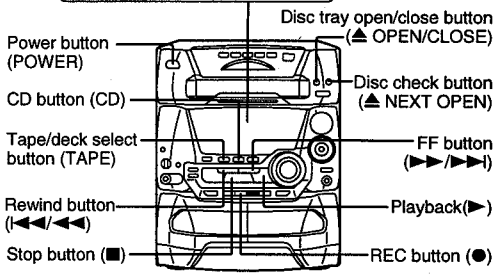
Clearing the Self-Diagnostic Display

- The contents of the abnormality display are stored in memory. In order to clear this memory, continue to press the stop button (■) for at least five seconds while in the self-diagnostic mode. The memory will clear, the word "CLEAR" will appear on the display briefly, then the letter "T" will appear once again. Always be sure to clear this memory after completing repairs.

Display Positions

Self-Diagnostic Display Example





Display content

Note: Items marked with (*) are automatically displayed, and do not require the procedure described in the section "Viewing the display."

Display code	Symptom or condition	Cause and method of correction
H01	Cassette deck does not operate correctly.	Faulty cassette deck mechanism mode detection switch (Deck 1: S951, Deck 2: S971) and plunger. (Check and replace)
H02	Unit does not record, or the unit goes into recording mode even when the erasure-prevention tabs have been removed from the cassette.	Faulty erasure-prevention tab detection switch (S974, S975) or short-circuit. (Check and replace)
H03	Tape does not play, even when the tape deck play button is pressed. The motor operates when the tape deck play button is pressed, even when no cassette is loaded in the deck.	Faulty tape detection switch (Deck 1: S952, Deck 2 : S972) or short-circuit. (Check and replace)
F01	When the tape Play button is pressed, the tape advances only slightly and then stops.	Reel pulse error. (Faulty Hall IC) (Check and replace)
F02	TPS (tape program search) does not work.	Faulty TPS signal detection or faulty plunger control. (Check and replace mechanism control IC)
F15	When the CD Play button is pressed when either the power is off, or from some function other than CD, it takes excessive time (8 seconds or more) for the CD to play.	Faulty traverse inner circumference position detection switch (S701). (Check and replace)
F16	Traverse deck pushes up disc tray.	Faulty up position detection switch (S3).
F25	CD tray closes immediately after it is opened.	Faulty disc tray open detection switch (S4). (Check and replace)
F26	CD does not play, even when the tape deck play button is pressed.	Faulty system control or servo processor IC (IC901 or IC702).
F27	Tray keeps moving for a while, or selected tray does not open.	Faulty disc number detection switch (S5).
F28		Faulty stocker position detection or play position detection switch (S1 or S2).
F75	When a CD is loaded, "NO DISC" is displayed and the CD does not play.	Faulty CD circuit power supply. (Faulty power supply IC or CD circuit power supply system.) (Check and replace) Flexible circuit board has become disconnected or broken wiring. (Check and replace) Faulty servo-processor IC. (Check and replace)
* F61	When the power switch is switched on, it automatically switches back off, making it impossible to switch power on.	Faulty power amp. IC (IC601). When a DC voltage is applied to the speaker terminals.)

■ Operation Checks and Main Component Replacement Procedures

NOTE

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**
3. **Select items from the following index when checks or replacement are required.**

• Contents

■ Checking Procedures for each P.C.B. Page.

1. Checking for the main P.C.B. and tuner P.C.B.. ..... 26.
2. Checking for the CD servo P.C.B.. ..... 27,28.
3. Checking for the mechanism control P.C.B. and FL P.C.B.. ..... 28,29.
4. Checking for the power AMP P.C.B.. ..... 29,30.

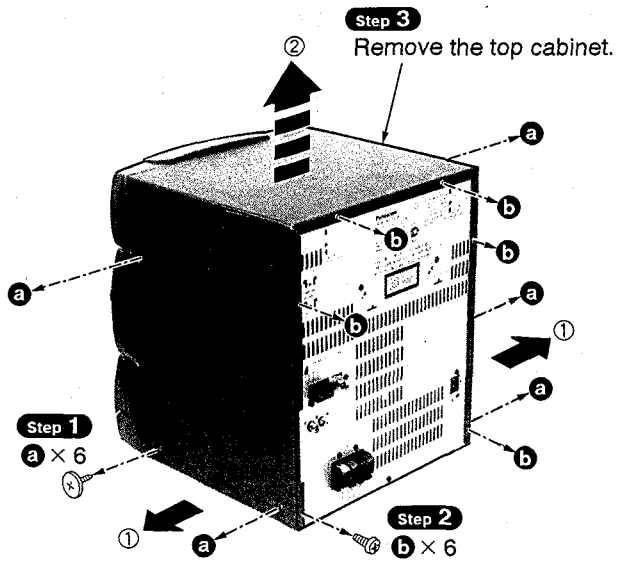
■ Main Component Replacement Procedures

1. Replacement for the cassette lid ass'y. ..... 30.
2. Disassembly for the CD changer unit. ..... 31.
3. Reassembly for the CD changer unit. ..... 32,33.
4. Replacement for the traverse deck ass'y. ..... 33,34.
5. Replacement for the power IC and regulator transistor. ..... 34,35.
6. Replacement for the pinch roller ass'y and head block. ..... 35.
7. Replacement for the DC motor ass'y, capstan belt A, capstan belt B and winding belt. ..... 35~37.

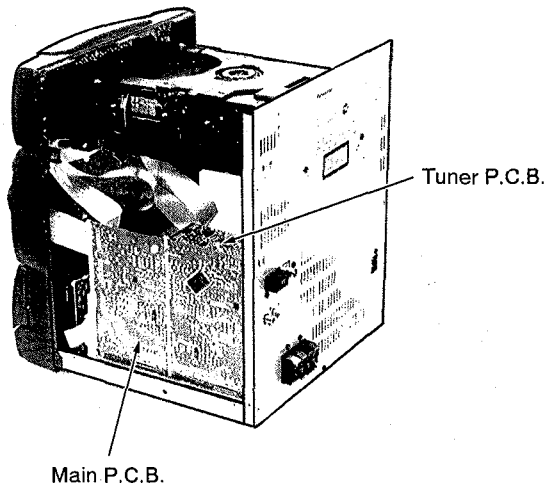
■ Measure for Tape Trouble ..... 37.

■ Checking Procedures for each P.C.B.

1. Checking for the main P.C.B. and tuner P.C.B.

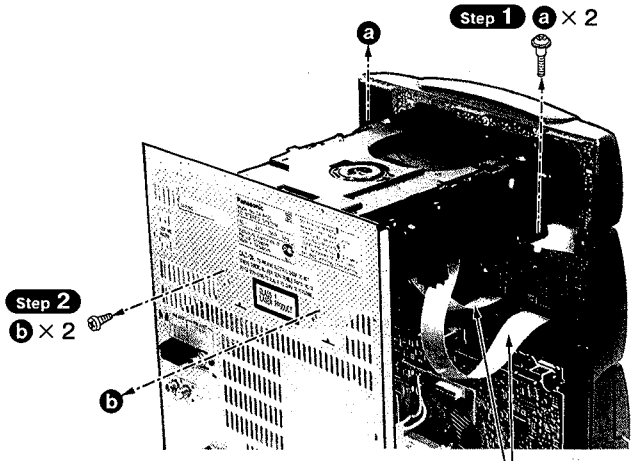


• Check the main P.C.B. and tuner P.C.B. as shown below.



2. Checking for the CD servo P.C.B.

• Follow the Step 1 ~ Step 3 of the item 1 in checking procedure for each P.C.B. on page 26.



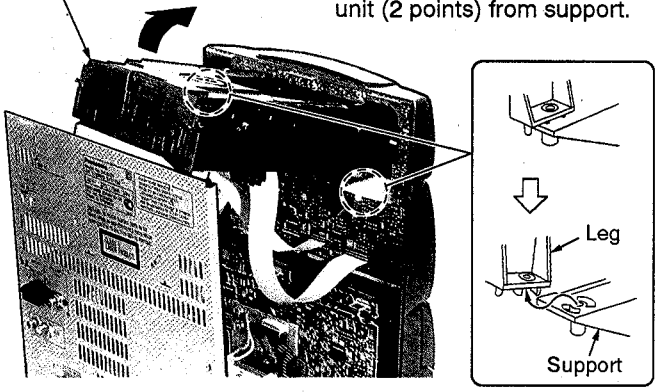
■ Notice for connecting FFC

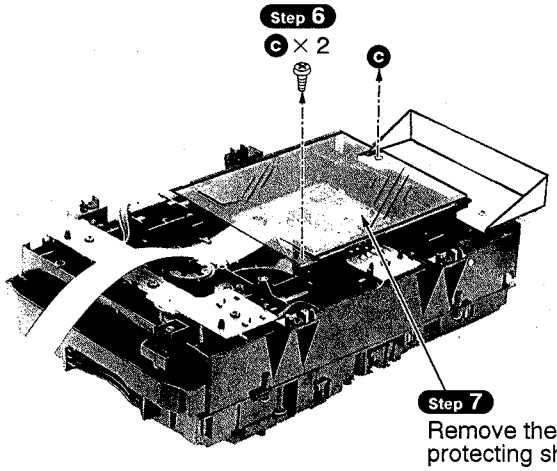
• When connecting FFC, use care to prevent damage to insert FFC with nipping reinforced plate of FFC edge.

Step 3
Pull out the FFCs (2 points).

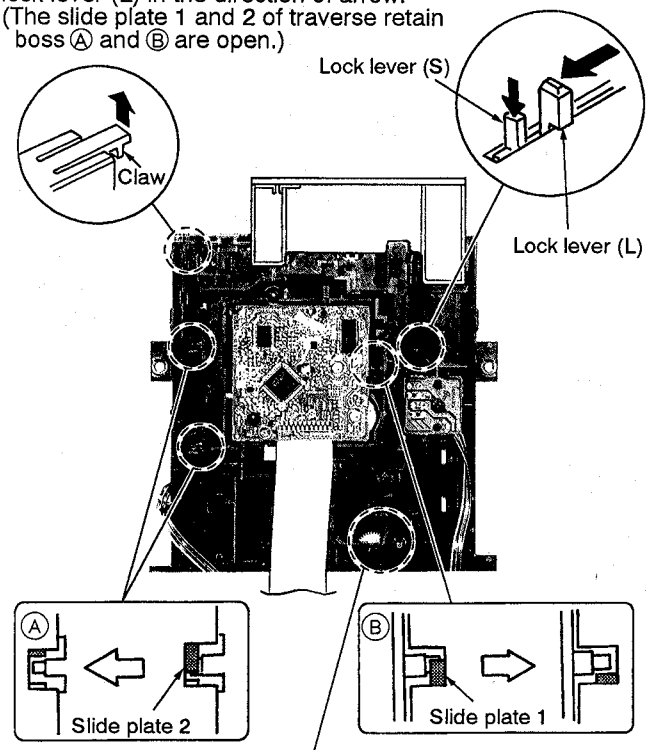
Step 5
Remove the CD changer unit.

Step 4
Lifting the CD changer unit, release the legs of CD changer unit (2 points) from support.



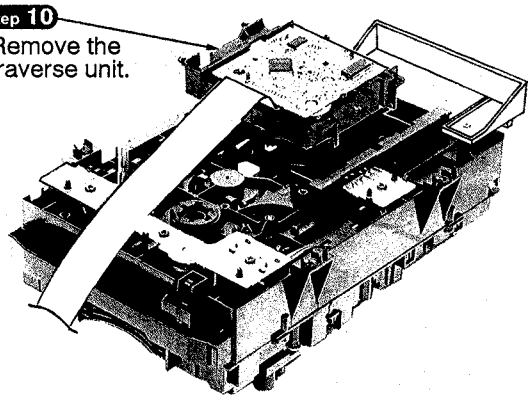


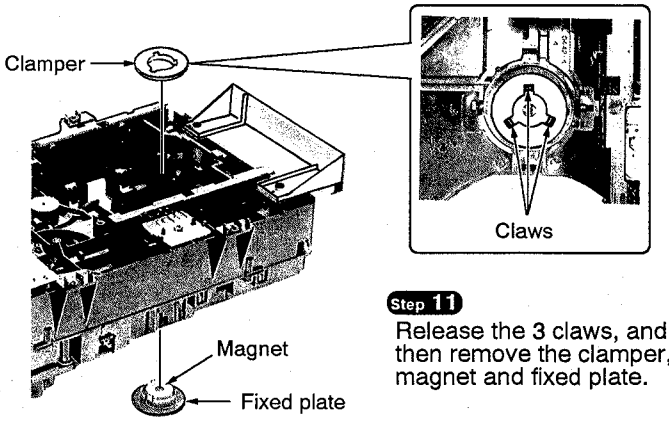
Step 9
Push the lock lever (S) with lifting the claw, and then push the lock lever (L) in the direction of arrow.
(The slide plate 1 and 2 of traverse retain boss Ⓐ and Ⓑ are open.)



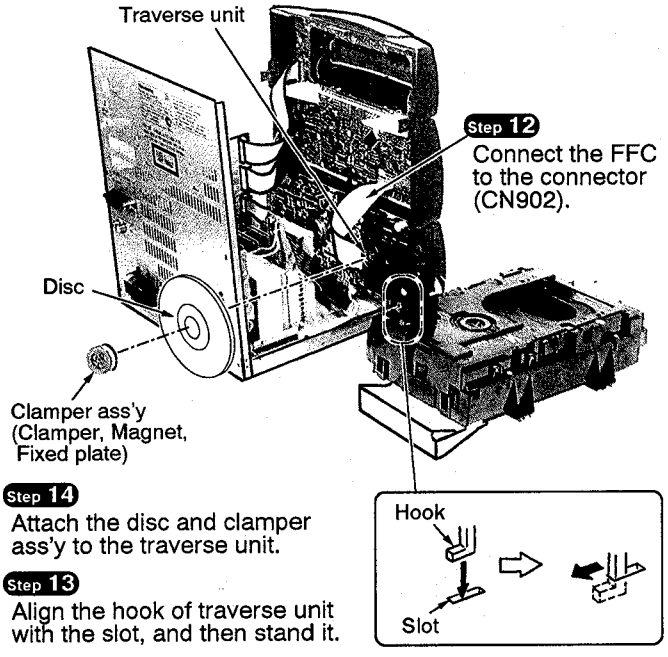
Step 8
Locate the traverse unit to the position "DOWN". (Rotate the drive gear in the direction of arrow so that the position is "DOWN".)

Step 10
Remove the traverse unit.

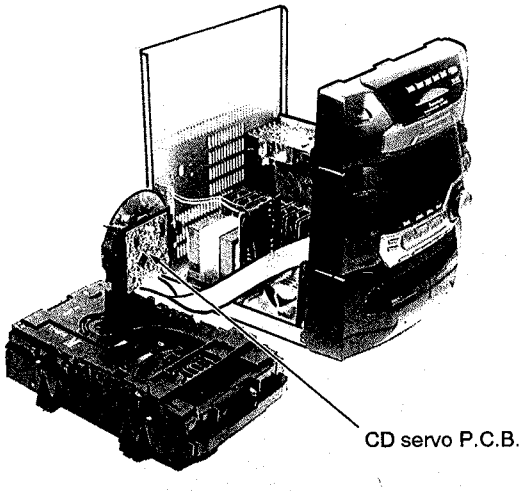




Step 11
Release the 3 claws, and then remove the clamper, magnet and fixed plate.


Traverse unit
Step 12
Connect the FFC to the connector (CN902).
Disc
Clamper ass'y (Clamper, Magnet, Fixed plate)
Step 14
Attach the disc and clamper ass'y to the traverse unit.
Step 13
Align the hook of traverse unit with the slot, and then stand it.
Hook
Slot

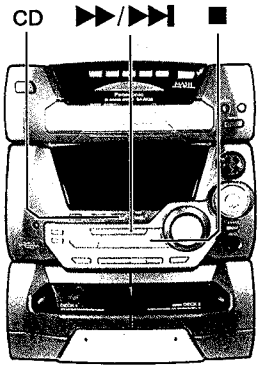
• Check the CD servo P.C.B. as shown below.



■ Mode setting of unit when checking CD servo P.C.B.

The following settings are necessary when operating CD traverse deck after removed from CD changer unit.

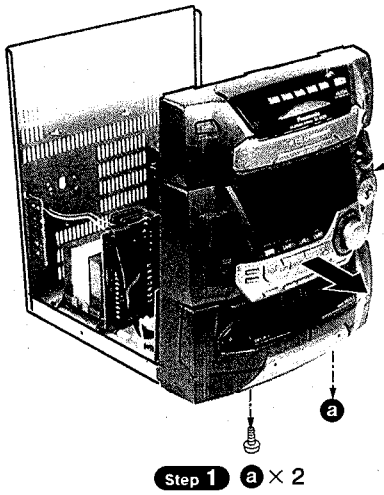
1. Power the unit "ON".
2. Press the "CD" button.
3. With pressing " ■ " button for 2 seconds or more, push the "▶▶/▶▶▌" button for 2 seconds or more at the same time.



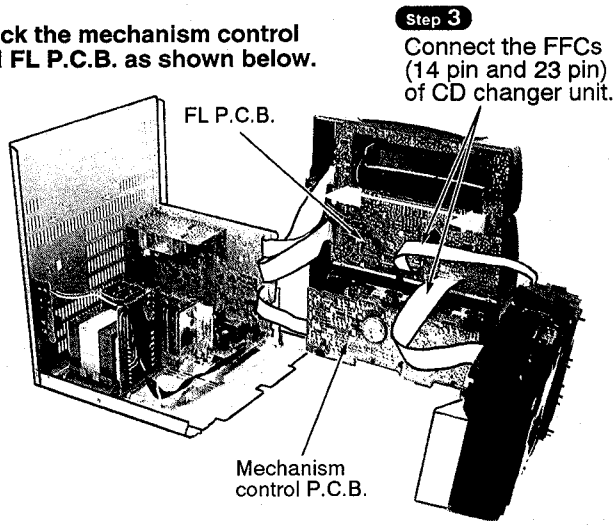
Depending on these settings, CD traverse deck which removed from CD changer unit can be operated.
In this setting mode, the CD changer unit will not operate.

3. Checking for the mechanism control P.C.B. and FL P.C.B.

- Follow the Step 1 ~ Step 3 of the item 1 in checking procedure for each P.C.B. on page 26.
- Follow the Step 1 ~ Step 5 of the item 2 in checking procedure for each P.C.B. on page 27.

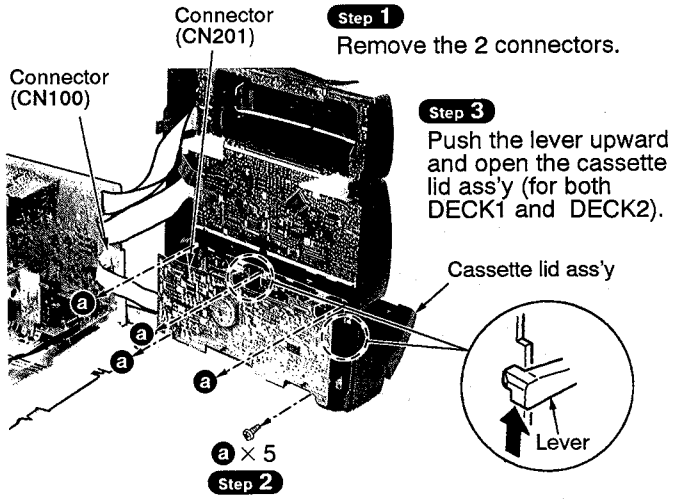


• Check the mechanism control and FL P.C.B. as shown below.

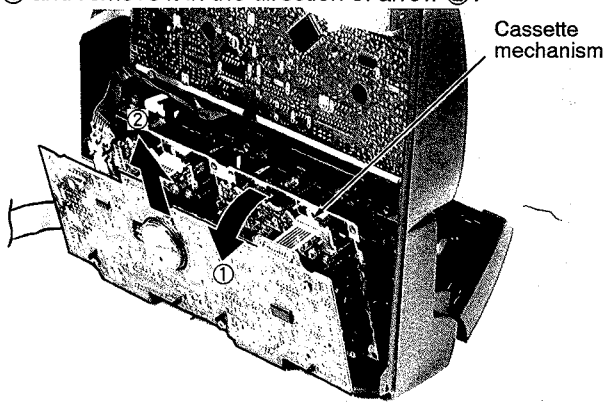


Removal of the mechanism control P.C.B. and mechanism P.C.B. for replacing parts.

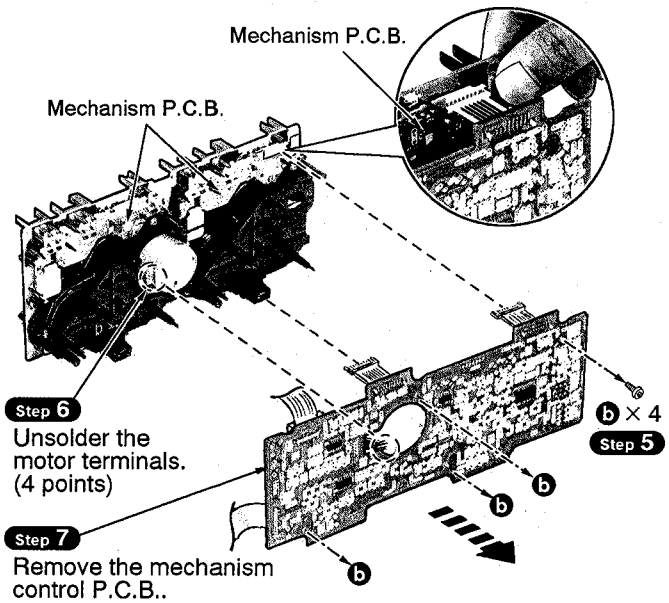
- Follow the Step 1 , Step 2 of the item 3 in checking procedure for each P.C.B. on page 28.

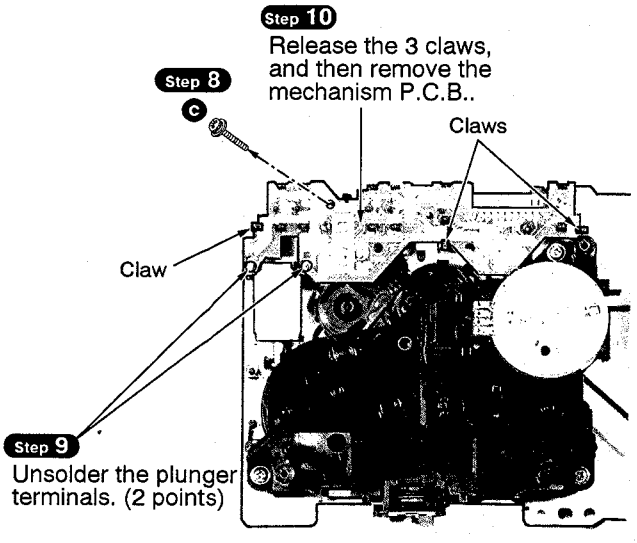


Step 4
Tilt the cassette mechanism in the direction of arrow ① and remove it in the direction of arrow ②.



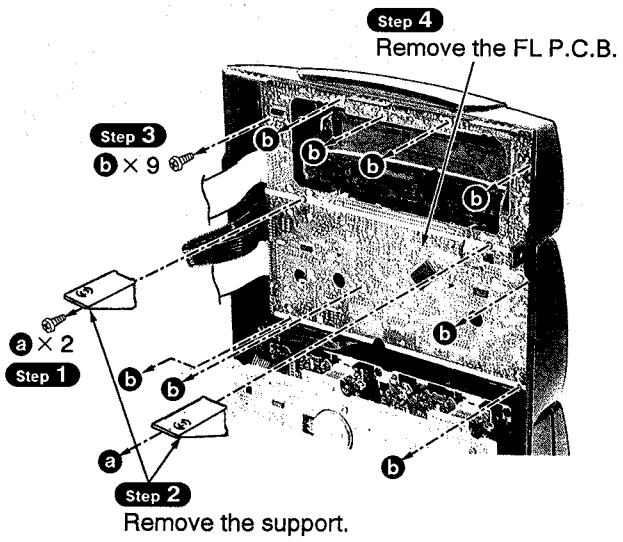
NOTE
When removeing the mechanism control P.C.B., remove it holding the mechanism P.C.B..

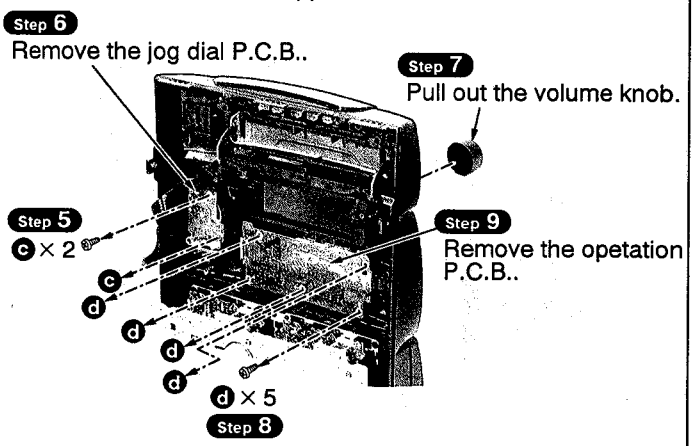




Removal of the FL P.C.B., jog dial P.C.B. and operation P.C.B. for replacing parts.

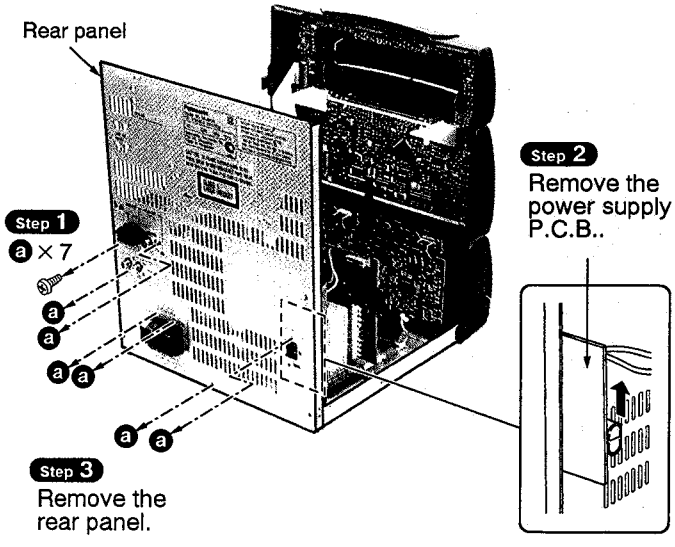
- Follow the **Step 1**, **Step 2** of the item 3 in checking procedure for each P.C.B. on page 28.



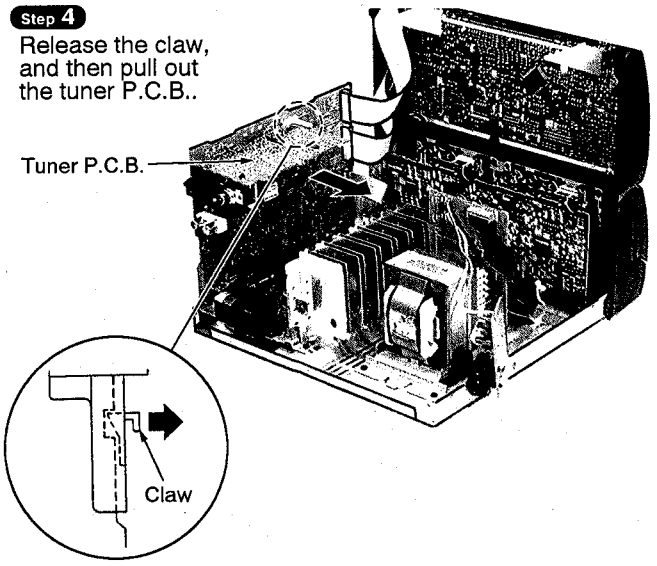


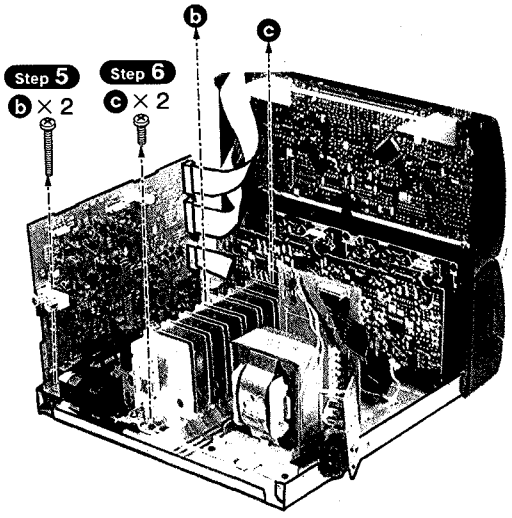
4. Checking for the power AMP P.C.B.

- Follow the **Step 1** ~ **Step 3** of the item 1 in checking procedure for each P.C.B. on page 26.
- Follow the **Step 1** ~ **Step 5** of the item 2 in checking procedure for each P.C.B. on page 27.



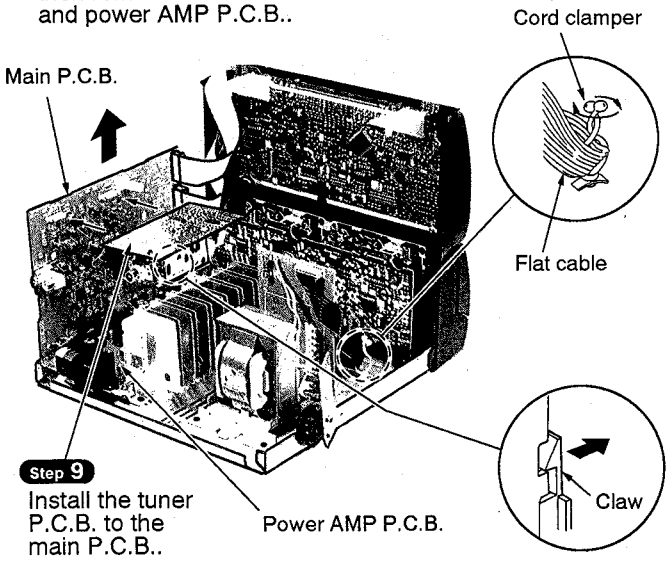
Step 4
Release the claw, and then pull out the tuner P.C.B..





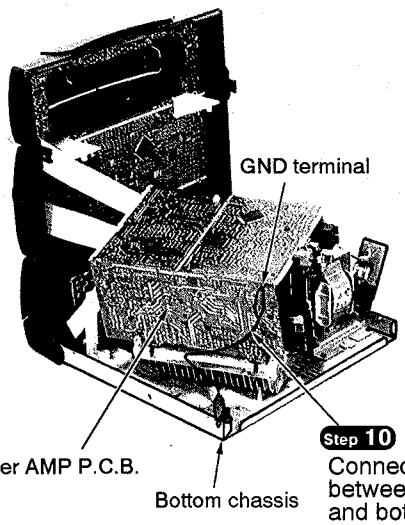
Step 8
Release the 1 claw, and then remove the main P.C.B. and power AMP P.C.B..

Step 7
Remove the flat cable from cord clamper.



Step 9
Install the tuner P.C.B. to the main P.C.B..

• **Check the power AMP P.C.B. as shown below.**

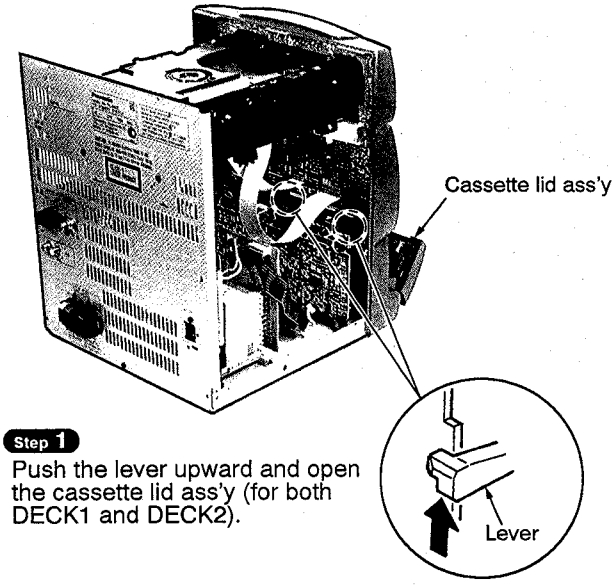


Step 10
Connect the lead wire between the GND terminal and bottom chassis.

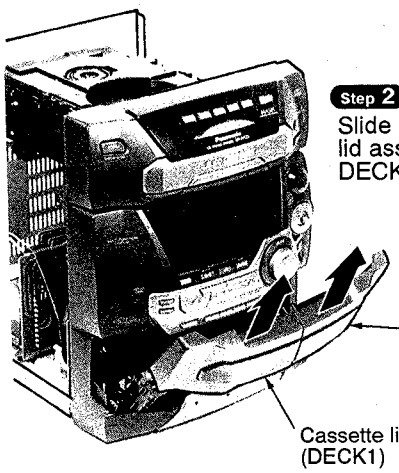
■ Main Component Replacement Procedures

1. Replacement for the cassette lid ass'y

• Follow the Step 1 ~ Step 3 of the item 1 in checking procedure for each P.C.B. on page 26.



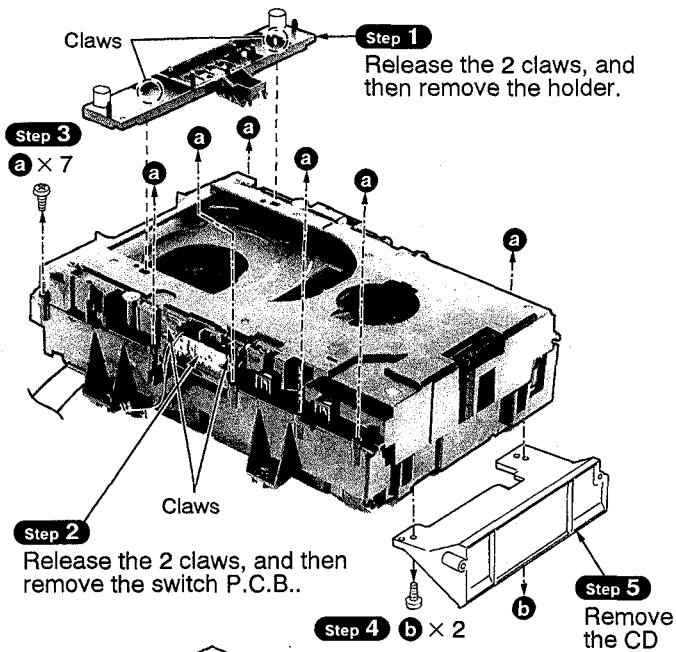
Step 1
Push the lever upward and open the cassette lid ass'y (for both DECK1 and DECK2).

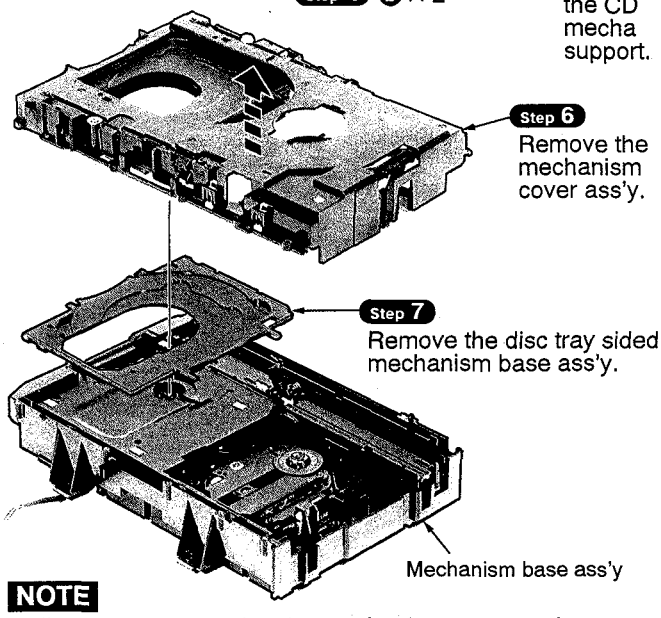


Step 2
Slide and remove the cassette lid ass'y (for both DECK1 and DECK2).

2. Disassembly for the CD changer unit

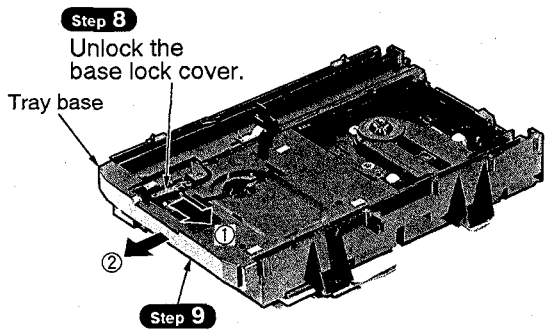
- Follow the Step 1 ~ Step 3 of the item 1 in checking procedure for each P.C.B. on page 26.
- Follow the Step 1 ~ Step 7 of the item 2 in checking procedure for each P.C.B. on page 27.

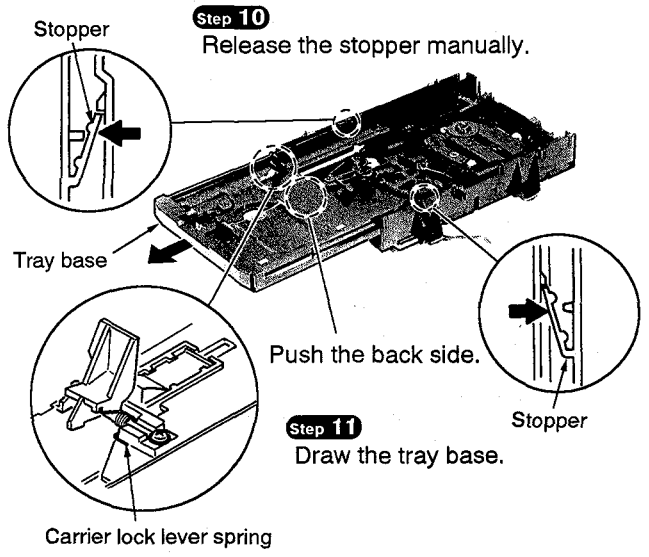




NOTE

4 disc trays contacted to the mechanism cover ass'y will be removed.
1 disc tray is removed to the mechanism base ass'y.



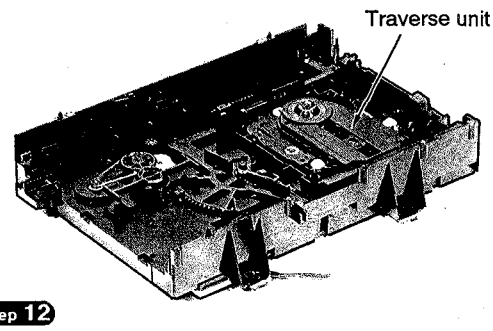


NOTE

In case that the tray base can not be open due to hooking, draw the tray base with finger pressing the back side indicated by ◌ of base.
(Take care handling of stopper)

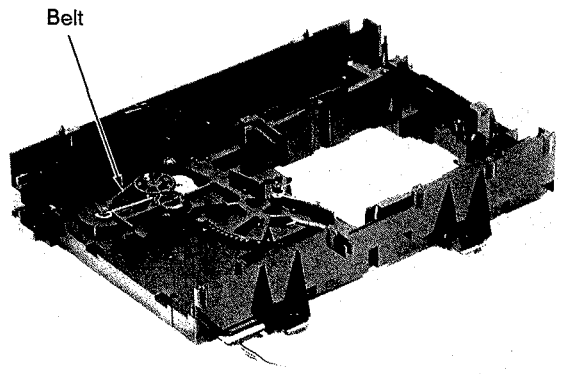
NOTE

Take care not avoid the carrier lock lever spring.



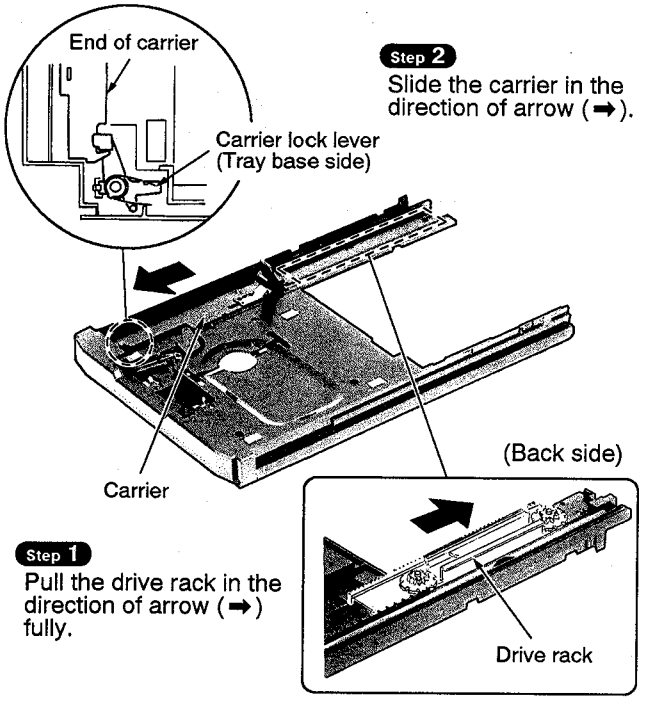
Step 12
Remove the traverse unit.

(• Follow the Step 8 ~ Step 10 of the item 2 in checking procedure for each P.C.B. on page 27.)



The belt and each part can be relaced after above procedures are performed.

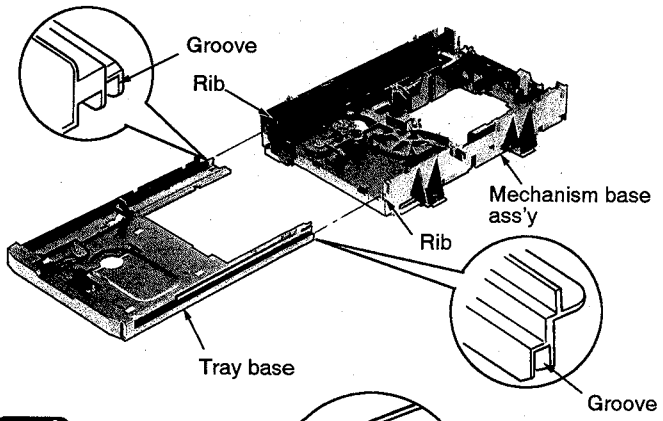
3. Reassembly for the CD changer unit



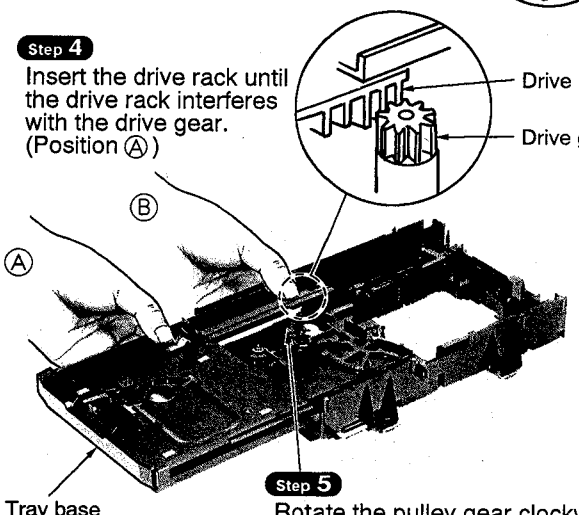
Step 1 Pull the drive rack in the direction of arrow (➡) fully.

Step 2 Slide the carrier in the direction of arrow (➡).

Step 3 Insert the tray base to the mechanism base ass'y with keeping the procedures **Step 1** and **Step 2**.



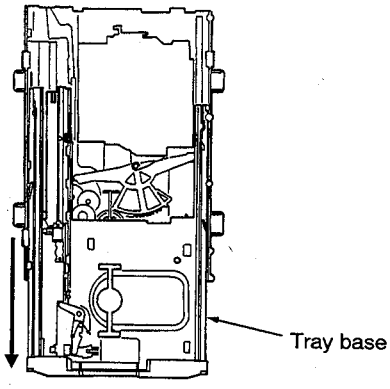
Step 4 Insert the drive rack until the drive rack interferes with the drive gear. (Position Ⓐ)



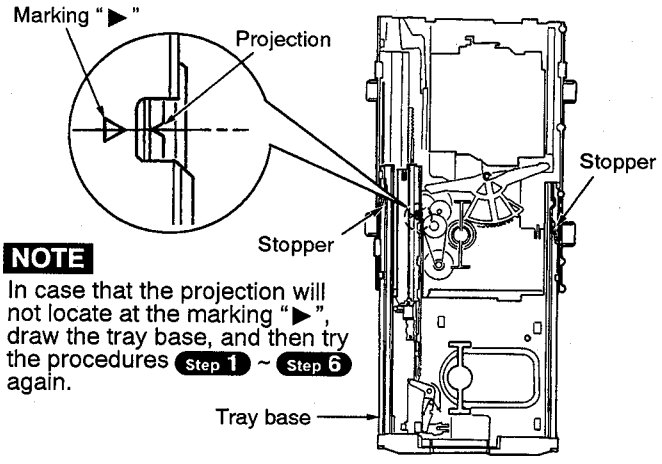
Step 5 Rotate the pulley gear clockwise gently by hand (5 or 6 times).

NOTE
When the gear begins to rotate, rotate the pulley gear with finger pressure (position Ⓑ) because the drive rack gear will fall free.

Step 6 Allow the tray base be open manually. (Draw the inserted tray base forward.)

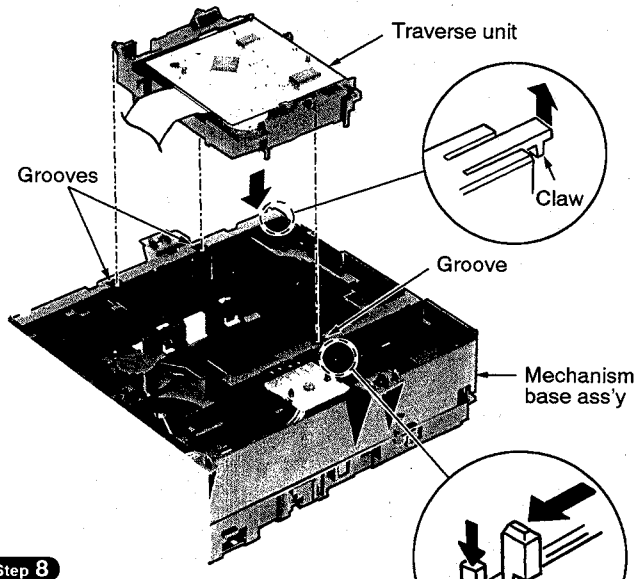


Step 7 Locate the projection at the marking "▶" as shown left.

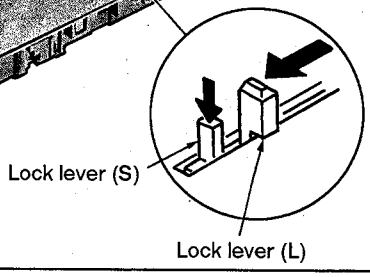


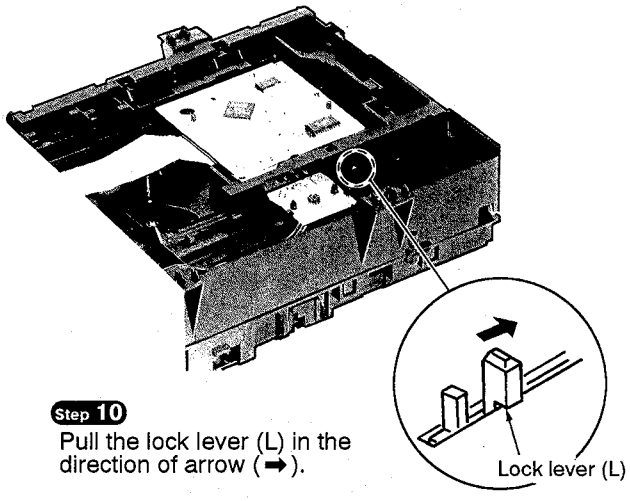
NOTE
In case that the projection will not locate at the marking "▶", draw the tray base, and then try the procedures **Step 1** ~ **Step 6** again.

Step 9 Align the boss of traverse unit with the groove of mechanism base ass'y.



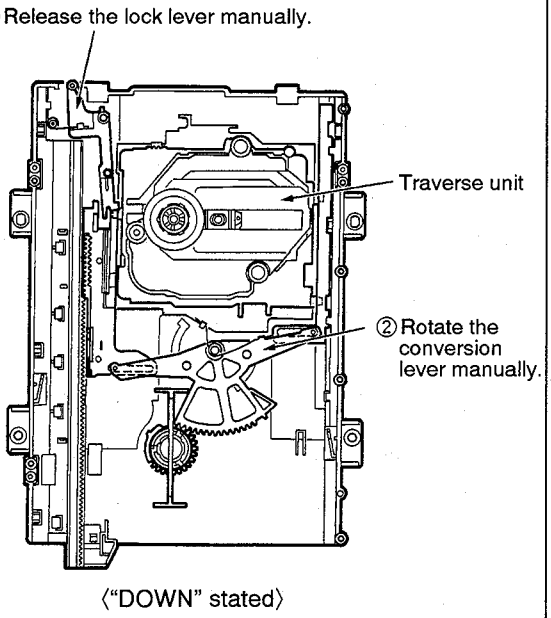
Step 8 While lifting the claw upward, press the lock lever (L) with forcing the lock lever (S).



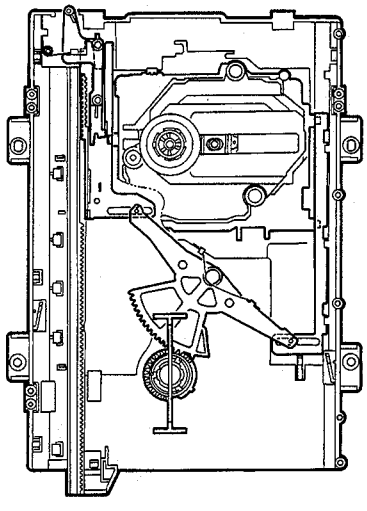


Step 10
Pull the lock lever (L) in the direction of arrow (➡).

• After assembly, confirm the traverse unit operation.

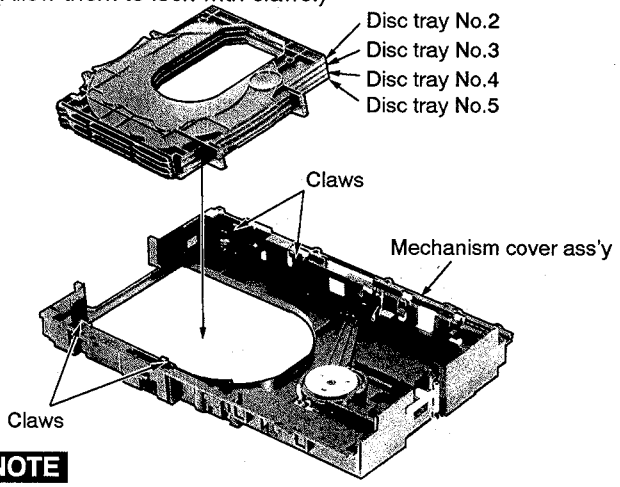


〈"DOWN" stated〉

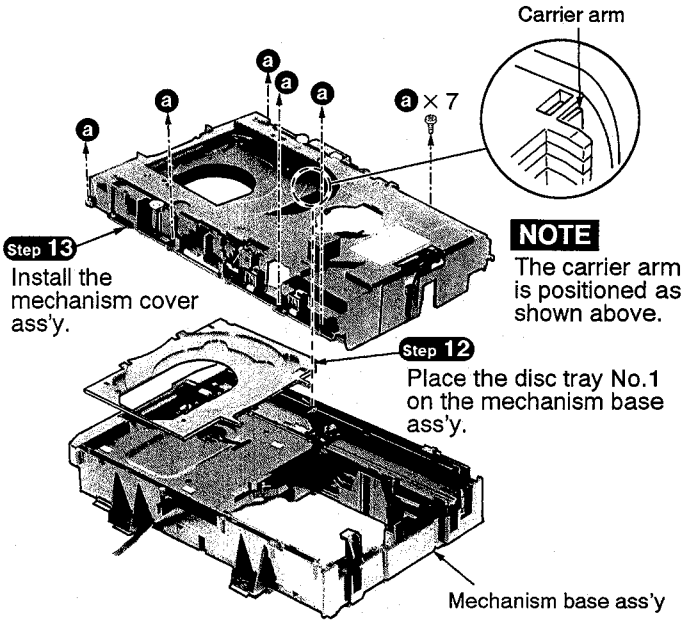


〈"UP" stated〉

Step 11
Install the 4 disc trays to the mechanism cover ass'y (Allow them to lock with claws.)

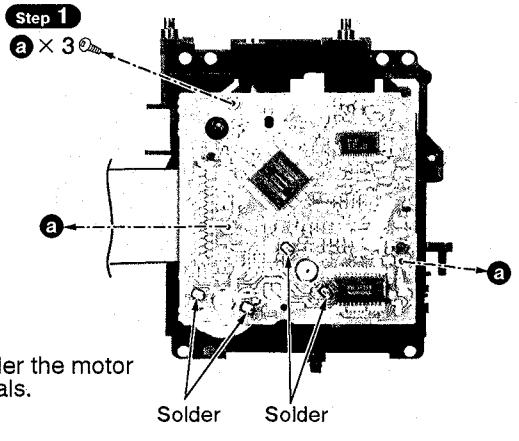


NOTE
Install the disc trays in specific order.
(Disc tray No. is indicated the tray.)

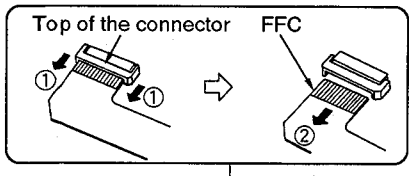

Carrier arm
a × 7
Step 13
Install the mechanism cover ass'y.
NOTE
The carrier arm is positioned as shown above.
Step 12
Place the disc tray No.1 on the mechanism base ass'y.
Mechanism base ass'y

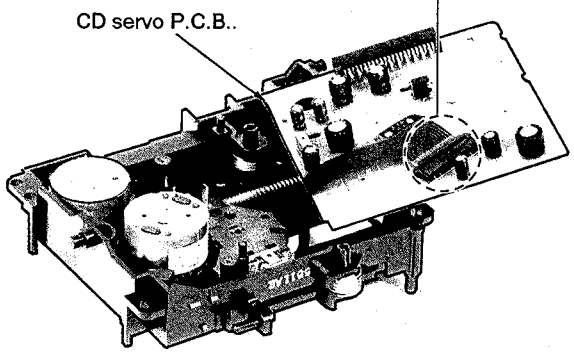
4. Replacement for the traverse deck ass'y

- Follow the **Step 1** ~ **Step 3** of the item 1 in checking procedure for each P.C.B. on page 26.
- Follow the **Step 1** ~ **Step 10** of the item 2 in checking procedure for each P.C.B. on page 27.

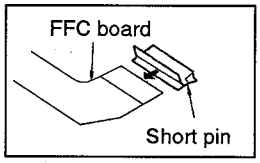


Step 3
Remove the FFC from the connector, and then remove the CD servo P.C.B..

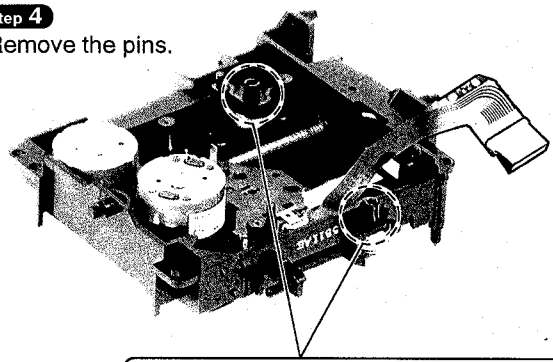




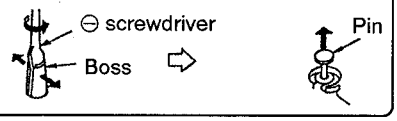
Caution:
Insert a short pin into the traverse unit FFC board.
(Refer to "Handling Precautions for Traverse Deck" on page 3.)

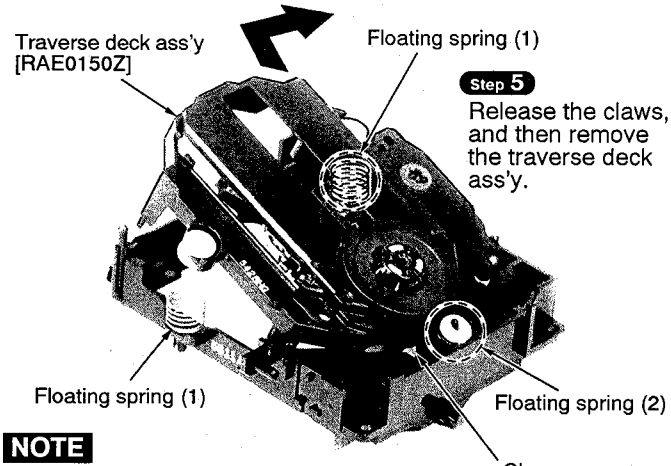


Step 4
Remove the pins.



1. Spread the boss with ⊖ screwdriver.
2. Pull out the pin in the direction of arrow.

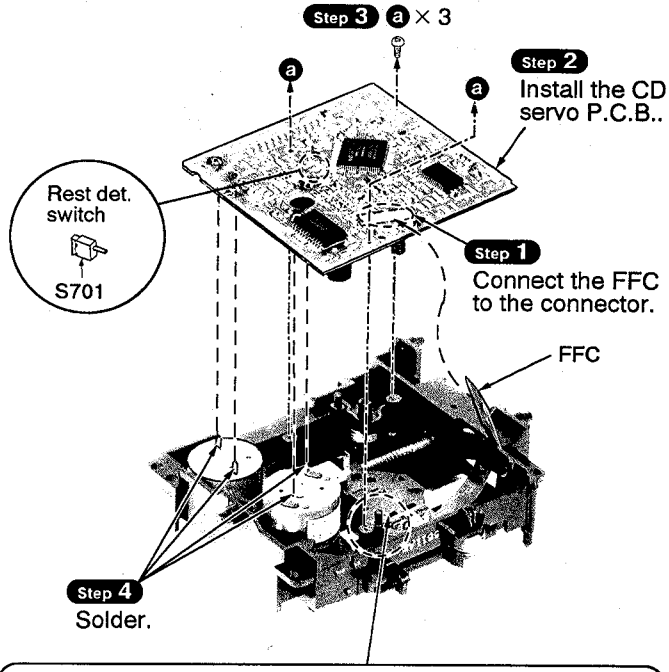


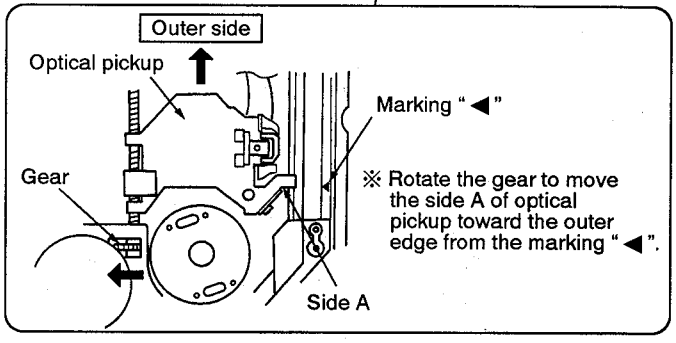


Step 5
Release the claws, and then remove the traverse deck ass'y.

NOTE
Be careful not to lose the 3 springs because those will also be removed on removal of the traverse deck ass'y.

Installation of the CD servo P.C.B.

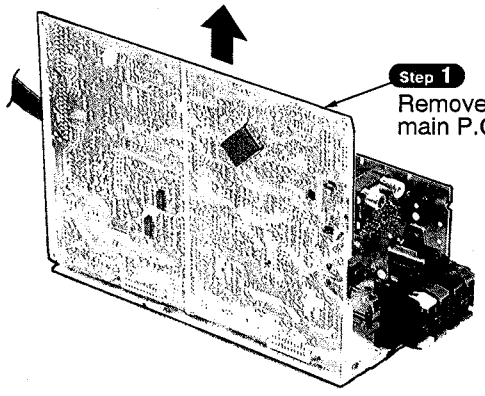


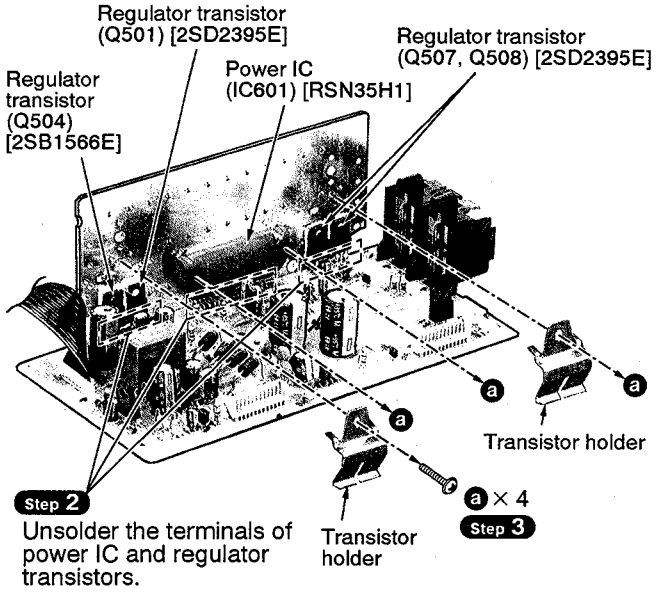

Outer side
Optical pickup
Marking " ◀ "
Gear
※ Rotate the gear to move the side A of optical pickup toward the outer edge from the marking " ◀ ".
Side A

NOTE
Before installing the CD servo P.C.B., move the optical pickup toward the outer edge from mark "◀".
[In case that the optical pickup is not moved toward the outer edge from the marking, the rest detect switch (S701) mounted on the CD servo P.C.B. may be damaged.]

5. Replacement for the power IC and regulator transistor

- Follow the Step 1 ~ Step 3 of the item 1 in checking procedure for each P.C.B. on page 26.
- Follow the Step 1 ~ Step 5 of the item 2 in checking procedure for each P.C.B. on page 27.
- Follow the Step 1 ~ Step 6 of the item 4 in checking procedure for each P.C.B. on pages 29 and 30.





Step 4
Remove the transistor holder.

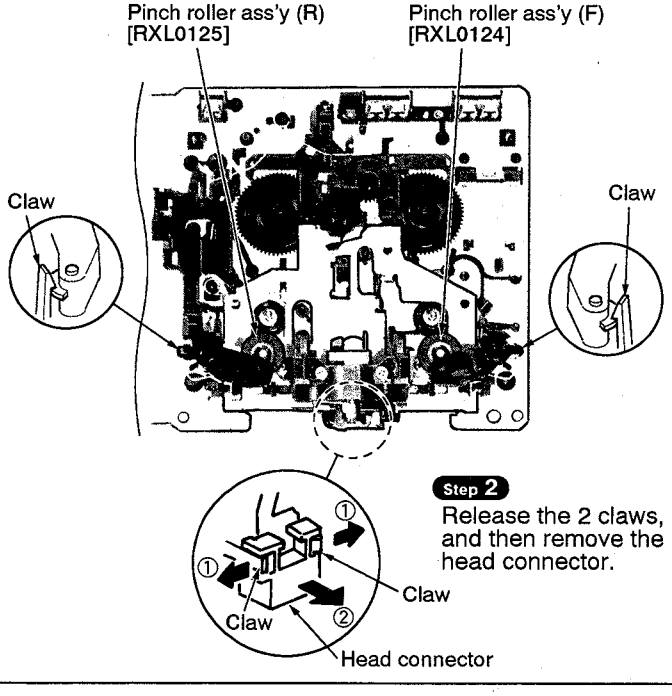
NOTE

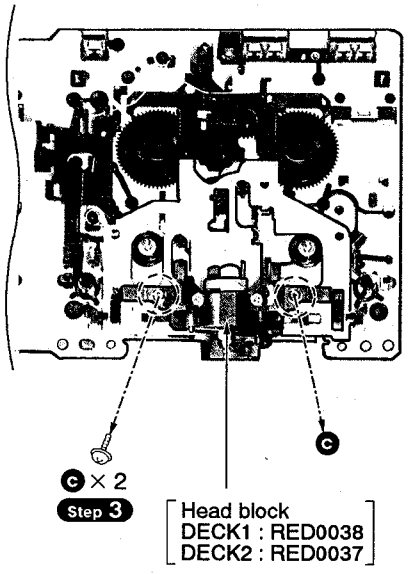
1. When mounting the power IC or regulator transistor apply silicone conpound (RFKX0002) to the rear side of power IC or regulator transistors.
2. Tighten enough the screws (a) after replacing the power IC and regulator transistor.

6. Replacement for the pinch roller ass'y and head block

- Follow the Step 1 ~ Step 3 of the item 1 in checking procedure for each P.C.B. on page 26.
- Follow the Step 1 ~ Step 7 of the item 3 in checking procedure for each P.C.B. on pages 28 and 29.

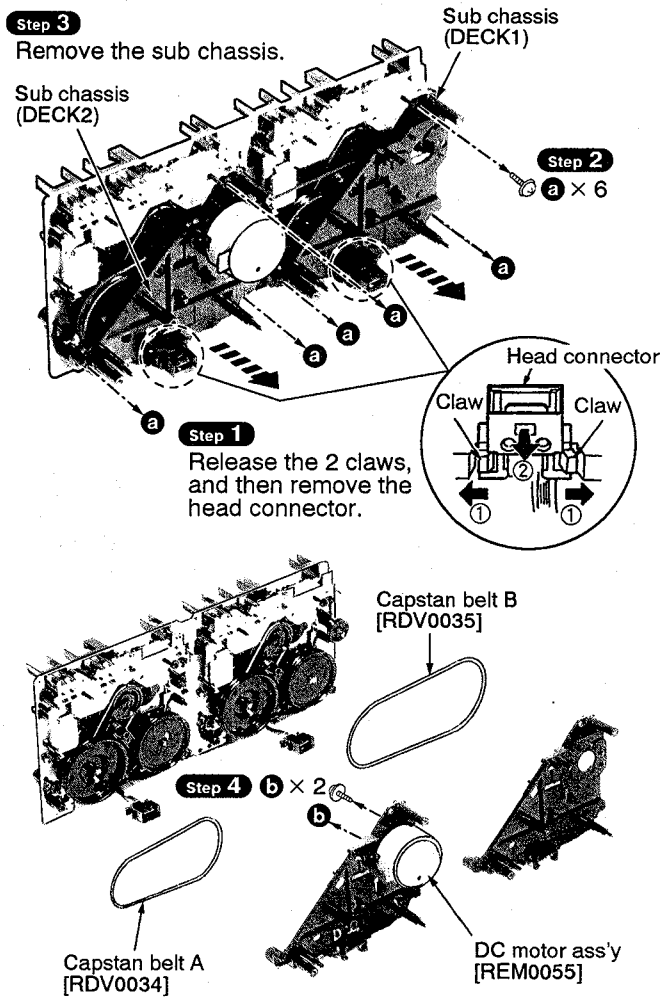
Step 1
Release the 2 claws, and then remove the pinch roller (R), (F).

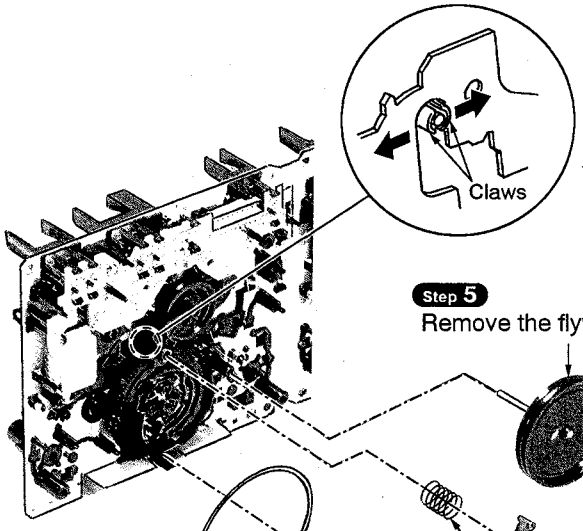




7. Replacement for the DC motor ass'y, capstan belt A, capstan belt B and winding belt

- Follow the Step 1 ~ Step 3 of the item 1 in checking procedure for each P.C.B. on page 26.
- Follow the Step 1 ~ Step 7 of the item 3 in checking procedure for each P.C.B. on pages 28 and 29.



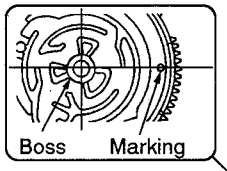


Step 5 Remove the flywheel R.

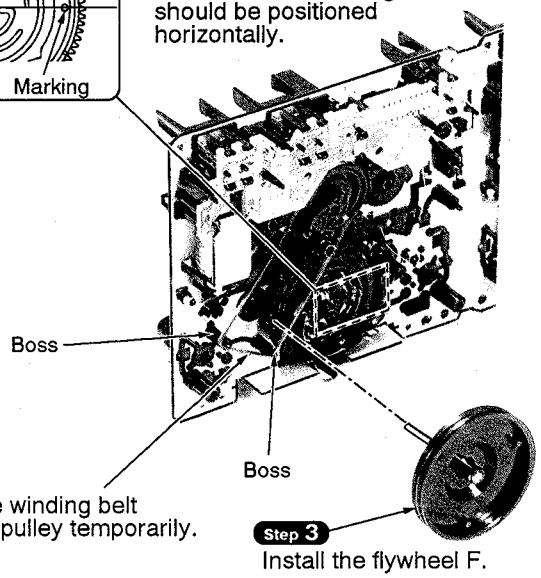
Step 6 Release the claw, and then remove the winding lever and spring.

Step 7 Remove the flywheel F.

Installation of the belt

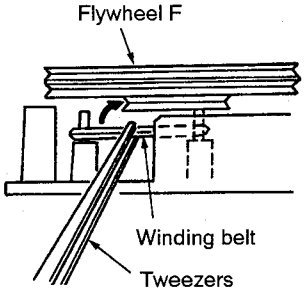


Step 1 The boss and marking should be positioned horizontally.



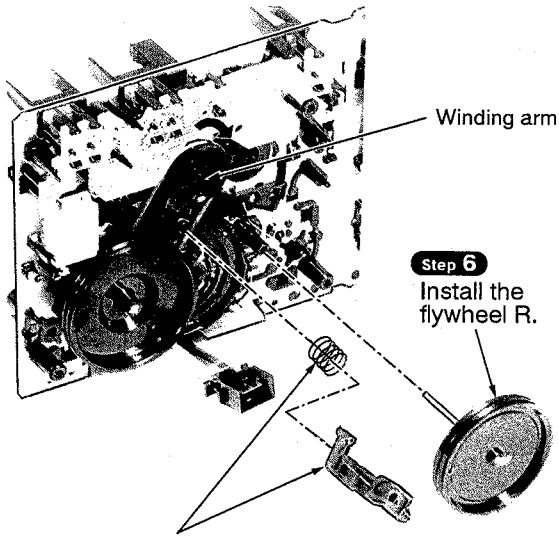
Step 2 Put the winding belt on the pulley temporarily.

Step 3 Install the flywheel F.



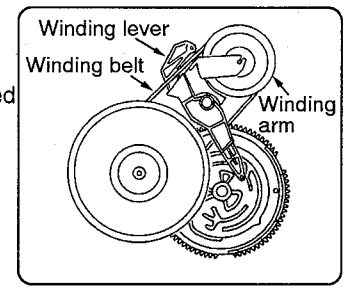
Step 4 Put the winding belt on the flywheel F.

NOTE
Take care not stick the grease on the belt.



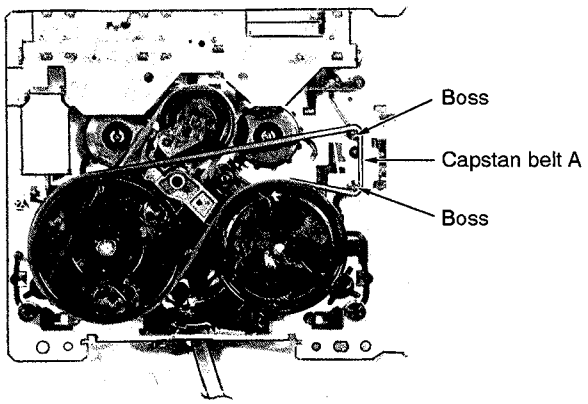
Step 6 Install the flywheel R.

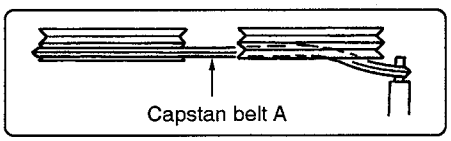
Step 5 Install the winding lever and spring while pressing the winding arm in the direction of arrow.
(The winding lever must be inserted completly and latched with claws.)

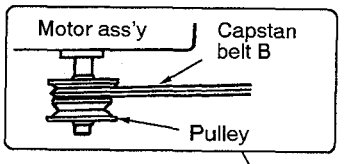


NOTE
The winding lever should be positioned as shown below.

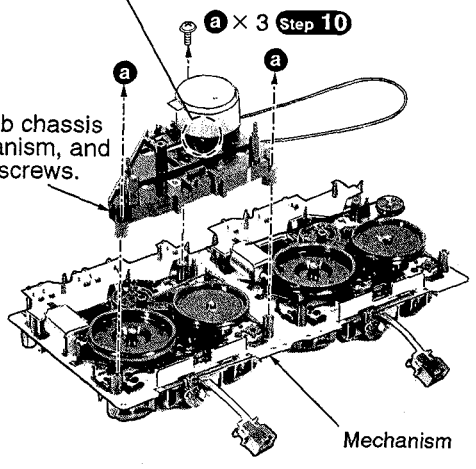
Step 7 Put the capstan belt A temporarily as shown below.





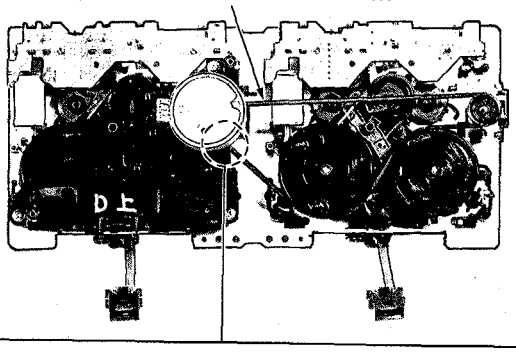


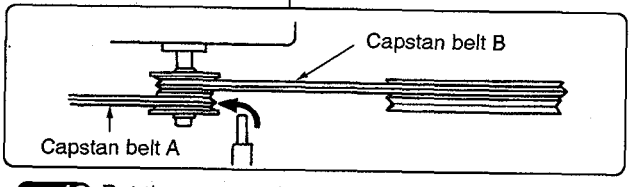
Step 8
Put the capstan belt B on the motor ass'y pulley.



Step 9
Install the sub chassis to the mechanism, and then tighten screws.

Step 11
Put the capstan belt B as shown below.

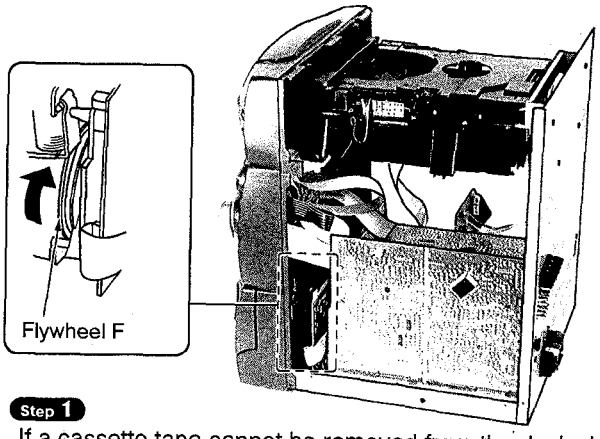




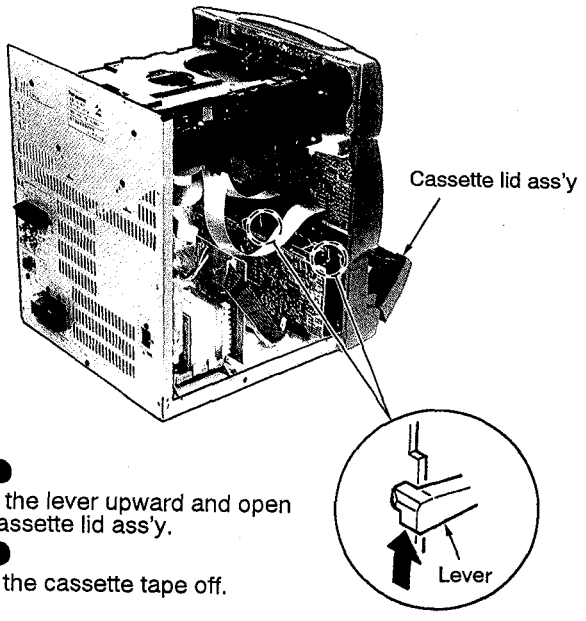
Step 12 Put the capstan belt A on the motor ass'y pulley.

■ Measure for Tape Trouble

• Follow the Step 1 ~ Step 3 of the item 1 in checking procedure for each P.C.B. on page 26.



Step 1
If a cassette tape cannot be removed from the deck since the tape is caught by the capstan or pinch roller during playback or recording, rotate the flywheel F in the direction of the arrow to remove the tape.



Step 2
Push the lever upward and open the cassette lid ass'y.

Step 3
Take the cassette tape off.

■ Schematic Diagram

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A CD SERVO CIRCUIT	39, 40
B TUNER CIRCUIT	41, 42
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E MECHANISM (DECK1) CIRCUIT	45
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I LOADING MOTOR CIRCUIT	51
J SWITCH CIRCUIT	51
K SWITCH (S2, S3) CIRCUIT	51
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M POWER AMP CIRCUIT	56, 57
N POWER TRANSFORMER CIRCUIT	57
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Notes :
(This schematic diagram may be modified at any time with the development of new technology.)

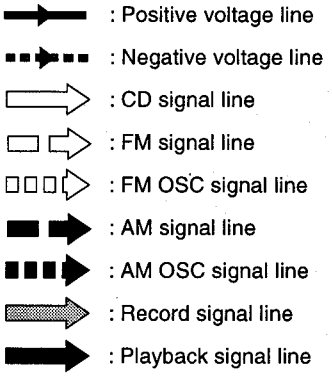
- S1 : Stocker position detect switch.
- S2 : Play position detect switch.
- S3 : Up position detect switch.
- S4 : Tray open detect switch.
- S5 : Disc number detect switch.
- S701 : Rest switch. (REST)
- S901 : Tuner/band select switch. (TUNER BAND)
- S902 : Playback, tuning, time adjust switch. (◀, ∨ TUNE/TIME ADJ)
- S903 : CD switch. (CD)
- S904 : Playback/pause, tuning, time adjust switch. (▶/II, TUNE/TIME ADJ ∧)
- S905 : Tape/deck select switch. (TAPE, DECK 1/2)
- S906 : Display select/demonstration switch. (-DISPLAY/–DEMO)
- S908 : Stop/tune mode switch. (■/TUNE MODE)
- S909 : AUX/MD select switch. (AUX/MD)
- S912 : FF/skip, memory switch. (▶▶/▶▶I, MEMORY)
- S913 : Clock/timer select switch. (CLOCK/TIMER)
- S914 : REW/R.skip, FM mode/beat proof switch. (I◀◀/◀◀, FM MODE/BP)
- S915 : Play timer/record timer switch. (◴ PLAY/◴ REC)
- S916 : Disc tray open/close switch. (⏏ OPEN/CLOSE)
- S917 : Deck1 open switch. (⏏ OPEN DECK1)
- S918 : CD manager switch. (CD MANAGER)
- S919 : Next tray open switch. (⏏ NEXT TRAY)
- S920 : Tape edit switch. (TAPE EDIT)
- S921 : Disc select switch. (DISC 5)
- S923 : Recording start/stop switch. (● REC/STOP)
- S924 : Disc select switch. (DISC 4)
- S925 : Super woofer switch. (S. WOOFER)
- S927 : Disc select switch. (DISC 3)
- S928 : Reverse mode select switch. (REV MODE)
- S929 : Disc select switch. (DISC 2)
- S930 : Deck2 open switch. (⏏ OPEN DECK2)
- S931 : Disc select switch. (DISC 1)
- S932 : Power switch. (POWER)
- S951 : Deck1 mode detect switch. (MODE)
- S952 : Deck1 half detect switch. (HALF)
- S953 : Deck1 CrO_2 tape detect switch. (ATS/CrO_2)
- S971 : Deck2 mode select switch. (MODE)
- S972 : Deck2 half detect switch. (HALF)
- S973 : Deck2 CrO_2 tape detect switch. (ATS/CrO_2)
- S974 : Deck2 reverse side record prevention tab detect switch. (R. REC. INH)
- S975 : Deck2 forward side record prevention tab detect switch. (F. REC. INH)
- VR101,VR102,VR103,VR104 : Playback gain adjustment VR.
- VR201 : Tape speed adjustment VR.
- VR901 : Volume control VR. (VOLUME)
- VR902 : Sound equalizer control VR. (SOUND EQ)

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
  No mark ..... CD STOP
  ( ) ..... CD playback (1kHz, L+R, 0dB)
  < > ..... FM
  ⌜ ⌟ ..... AM
  (( )) ..... DECK 2 playback
  《 》 ..... DECK 2 record

- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

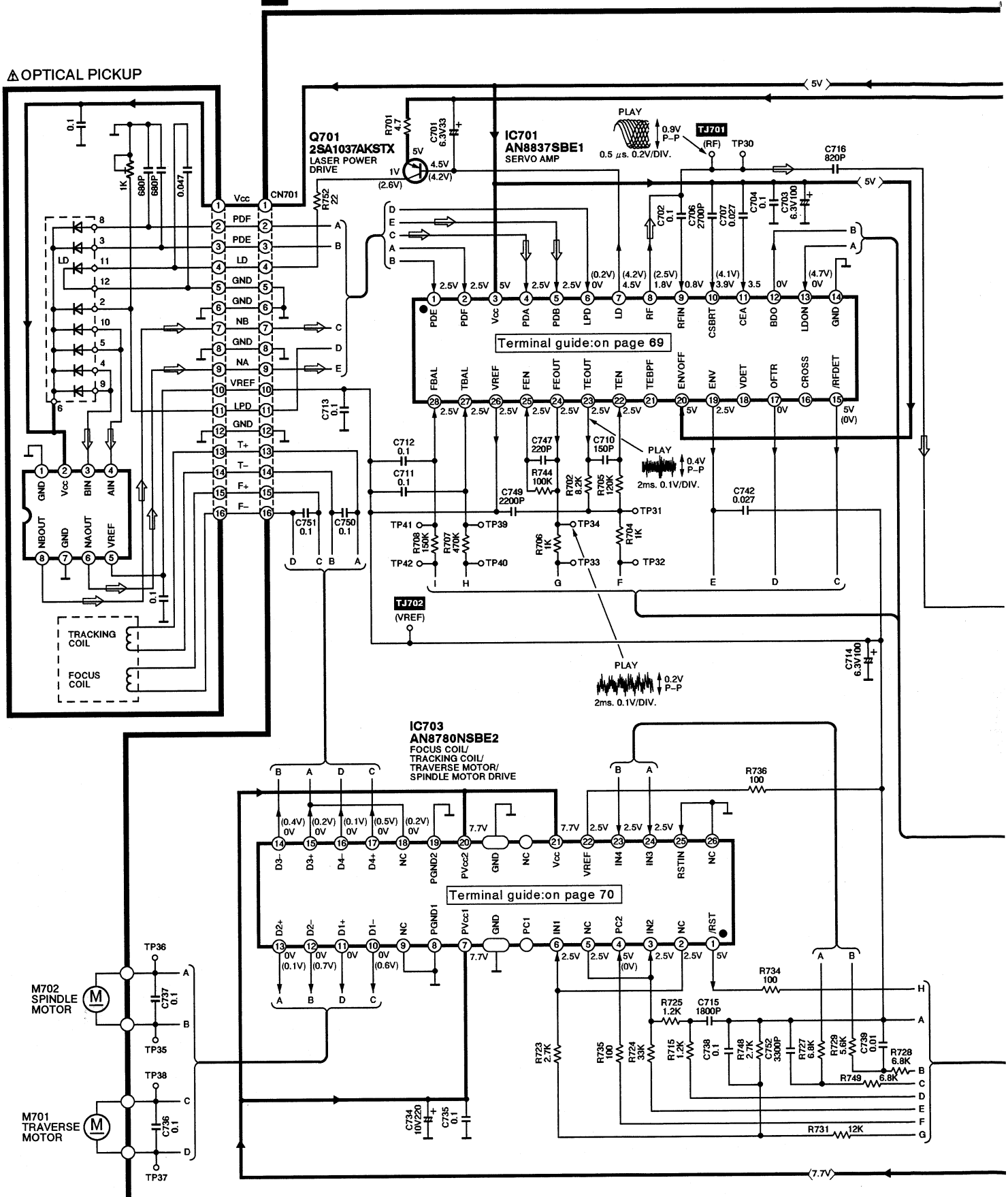
- **Caution!**
  IC and LSI are sensitive to static electricity.
  Secondary trouble can be prevented by taking care during repair.
  Cover the parts boxes made of plastics with aluminum foil.
  Ground the soldering iron.
  Put a conductive mat on the work table.
  Do not touch the legs of IC or LSI with the fingers directly.

- **Voltage and signal line**

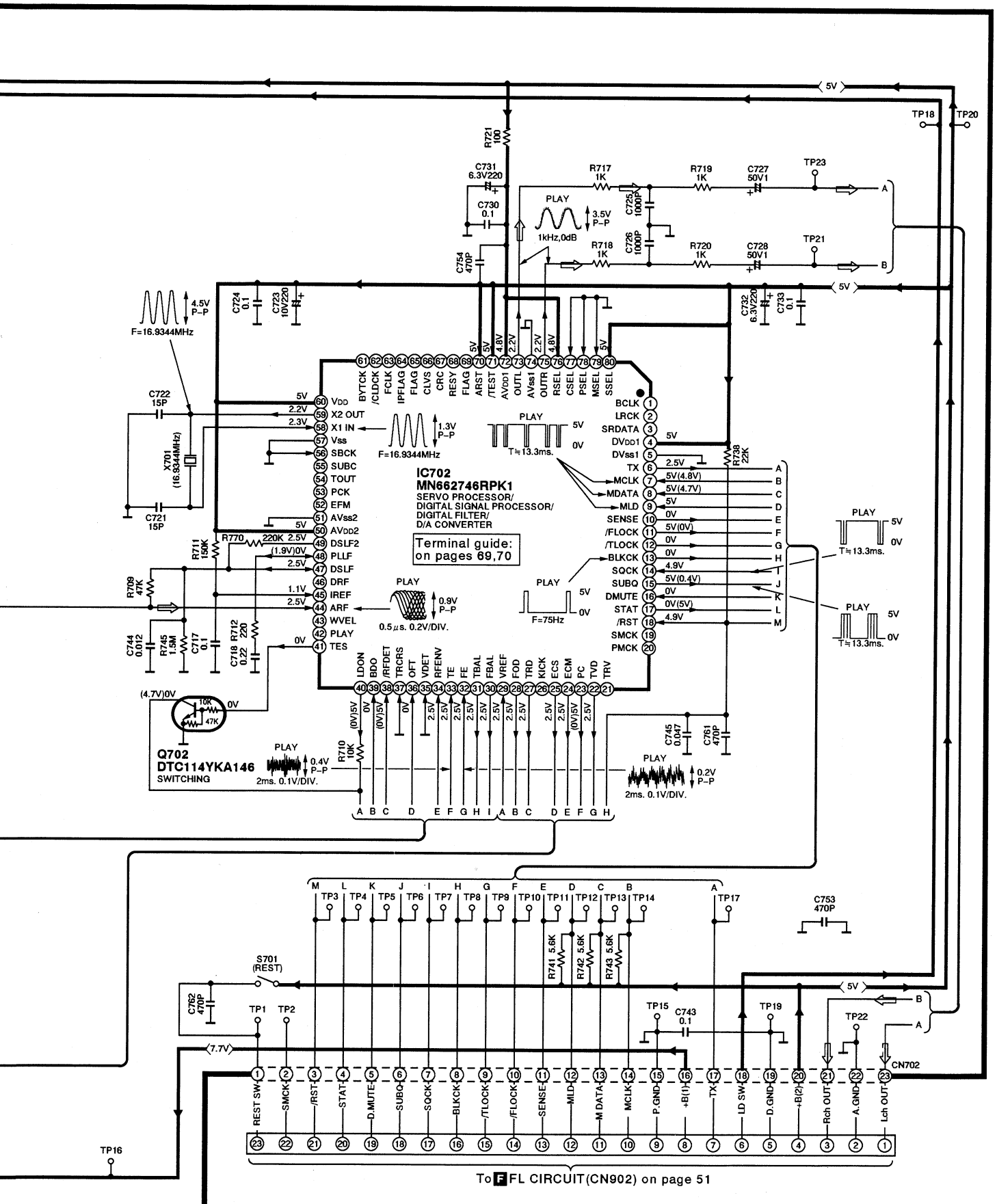

: Positive voltage line
: Negative voltage line
: CD signal line
: FM signal line
: FM OSC signal line
: AM signal line
: AM OSC signal line
: Record signal line
: Playback signal line

: Positive voltage line : CD signal line

A CD SERVO CIRCUIT (P.C.Board:on page 58)

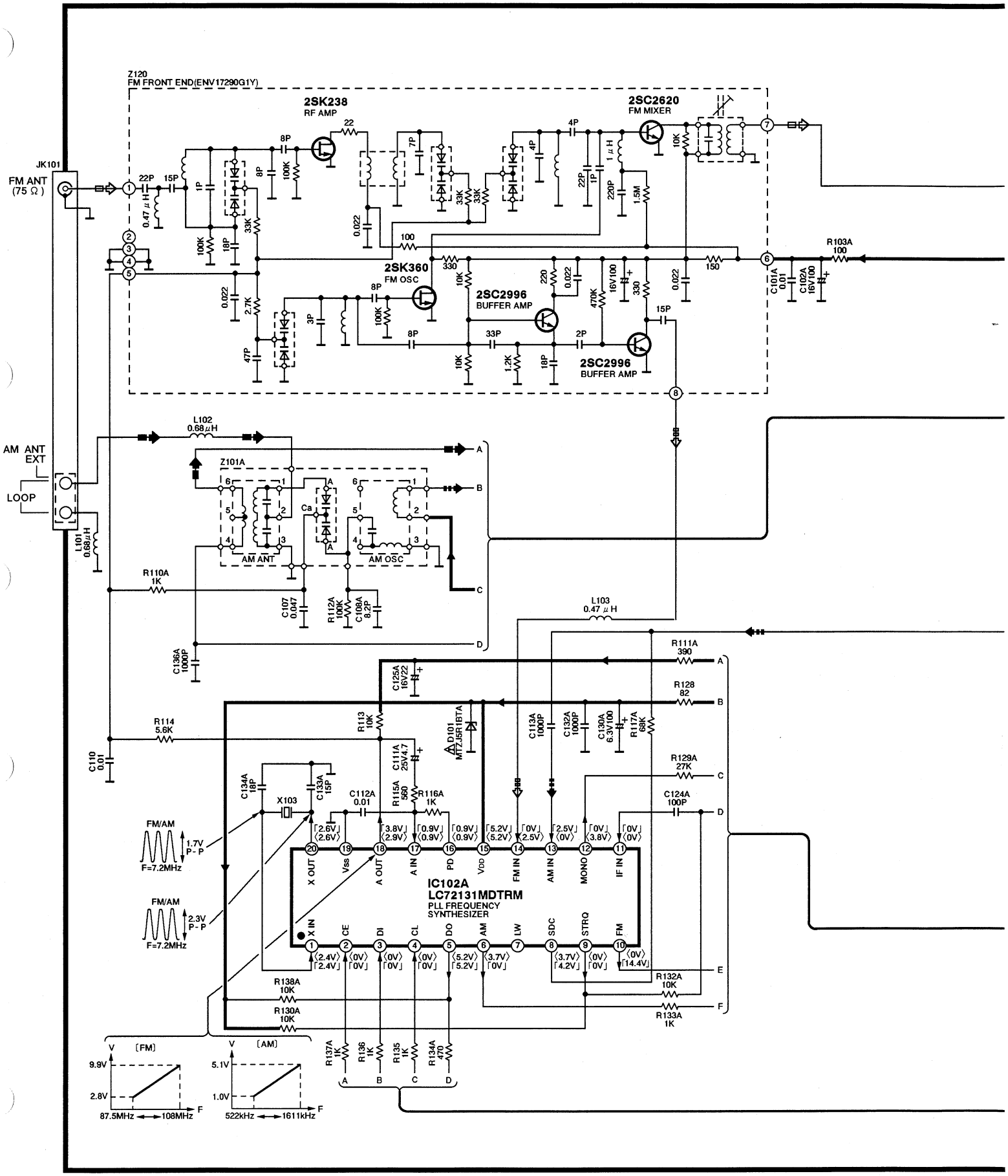


: Positive voltage line : CD signal line

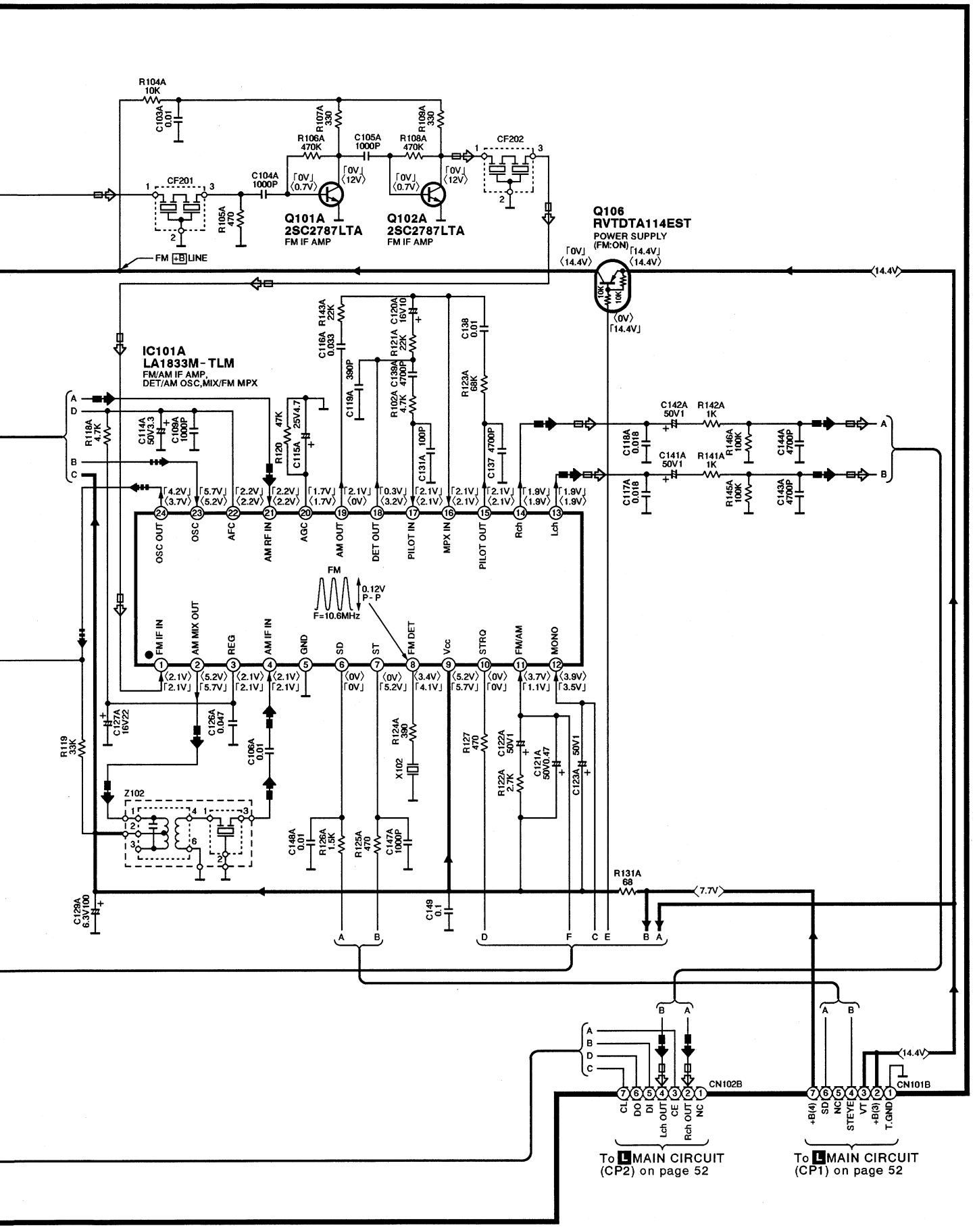


: Positive voltage line
: FM signal line
: FM OSC signal line
: AM signal line
: AM OSC signal line

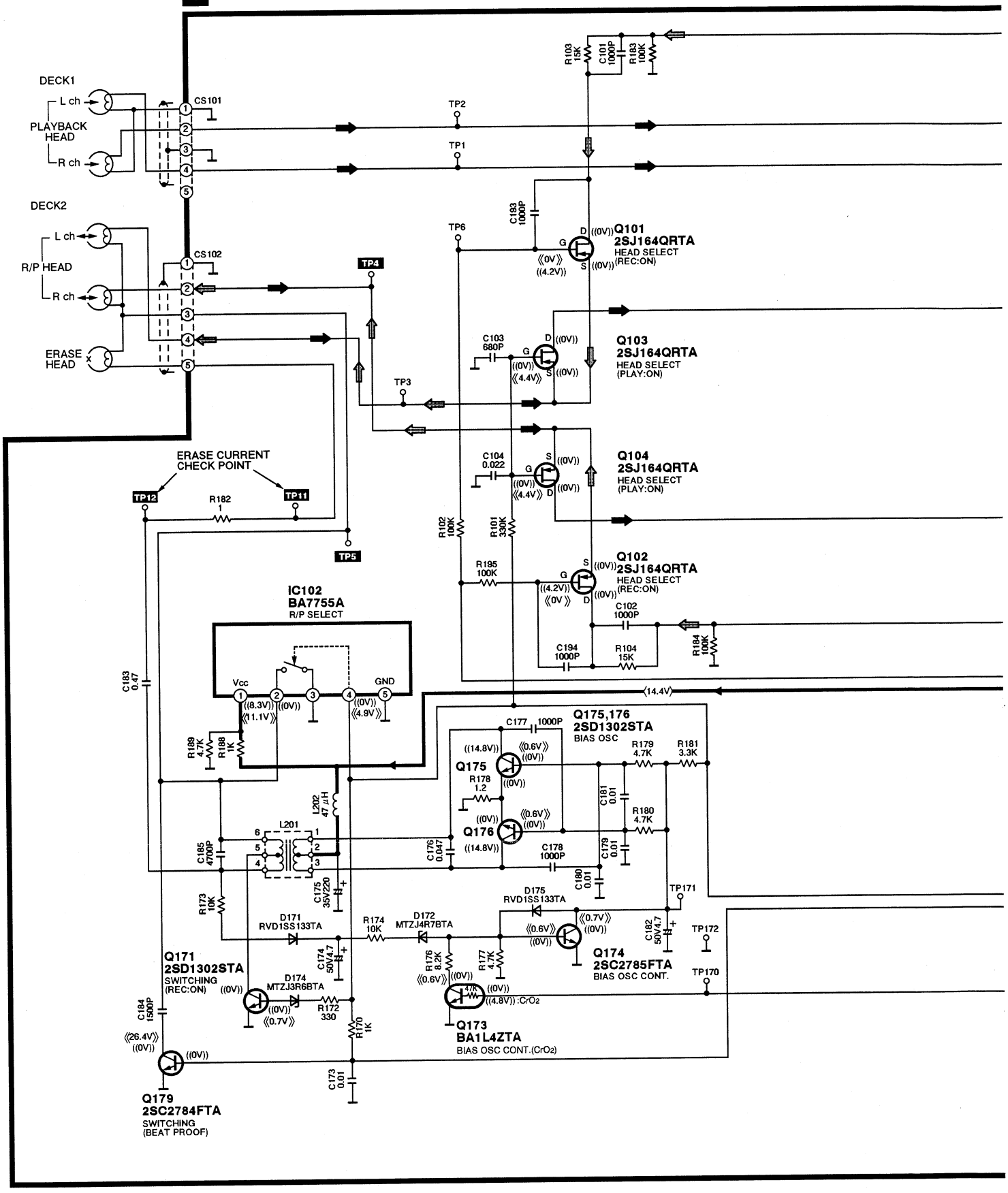
B TUNER CIRCUIT (P.C.Board:on page 59)



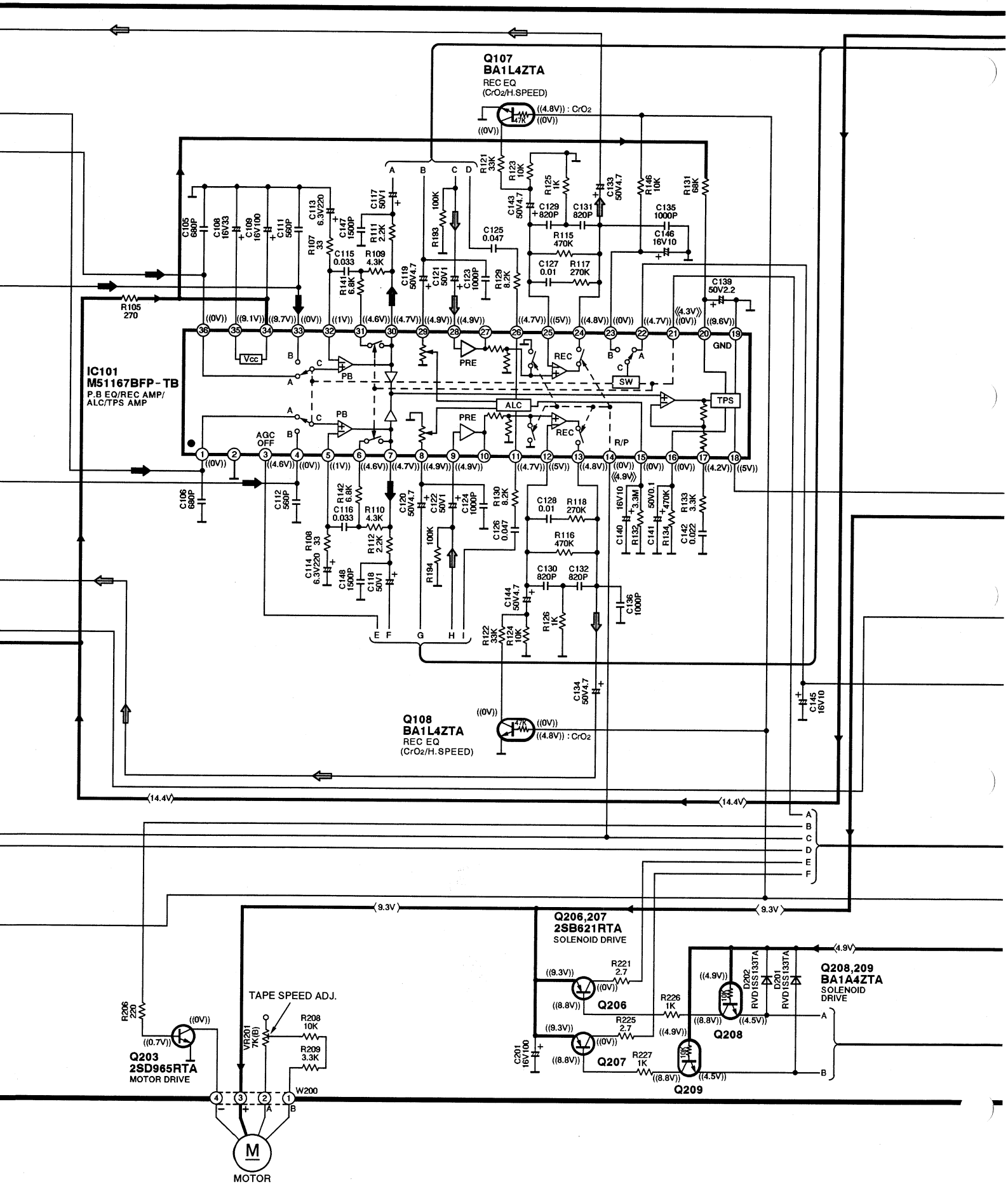
: Positive voltage line
: AM signal line
: Playback signal line
: FM signal line
: AM OSC signal line
: FM OSC signal line
: Record signal line



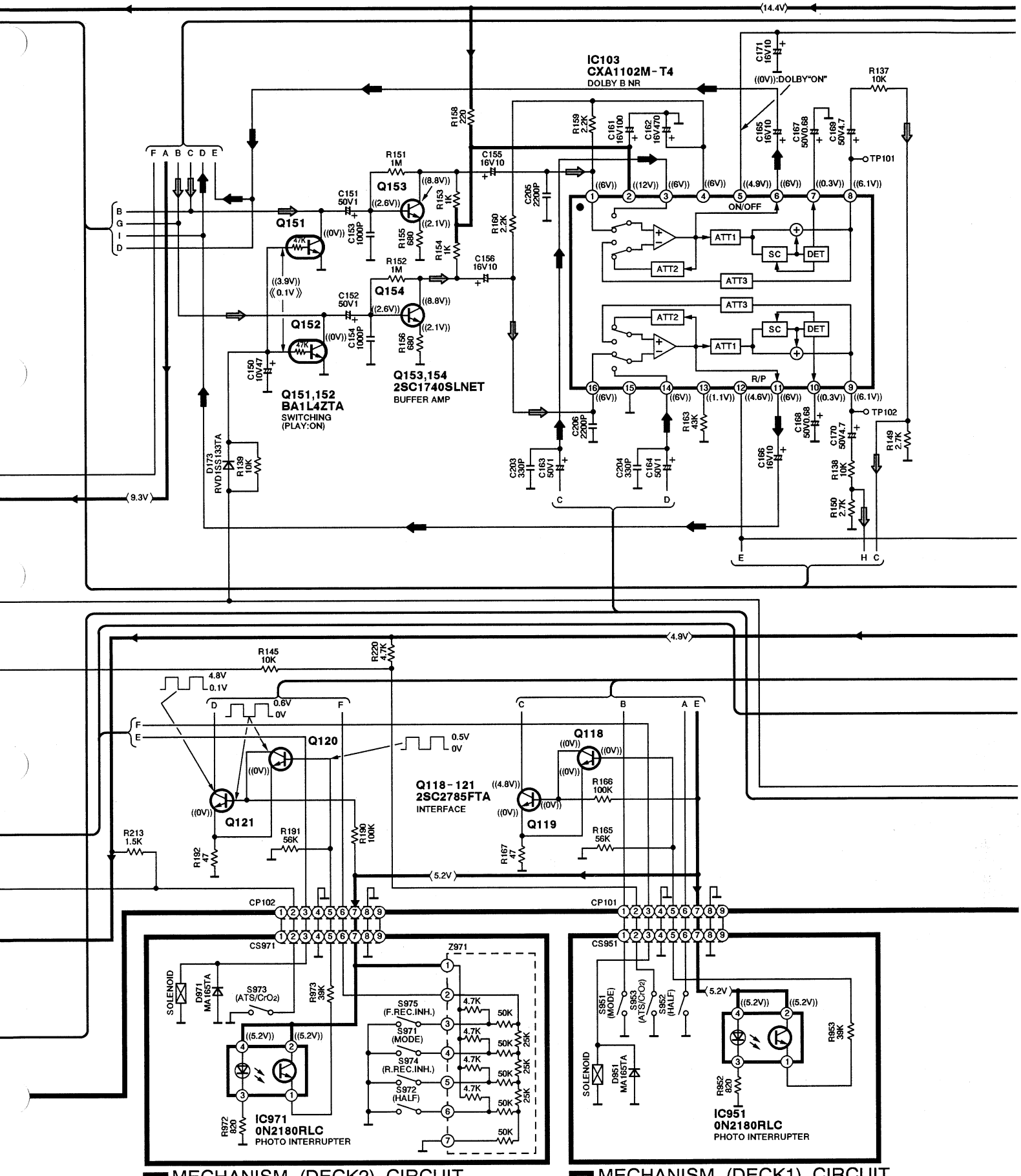
C MECHANISM CONTROL CIRCUIT (P.C.Board:on page 59)



: Positive voltage line : Record signal line : Playback signal line



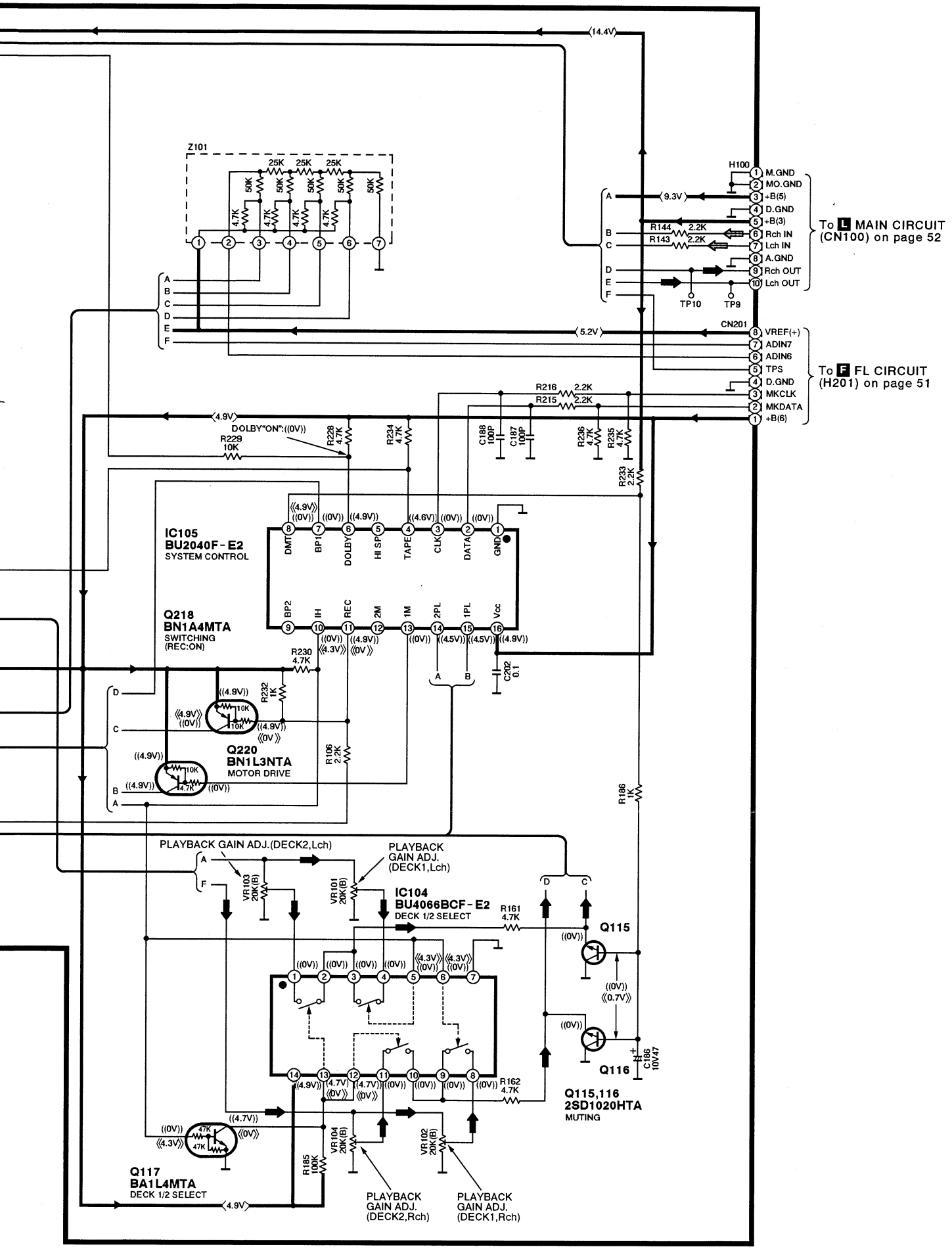
C MECHANISM CONTROL CIRCUIT (P.C.Board:on page 59)



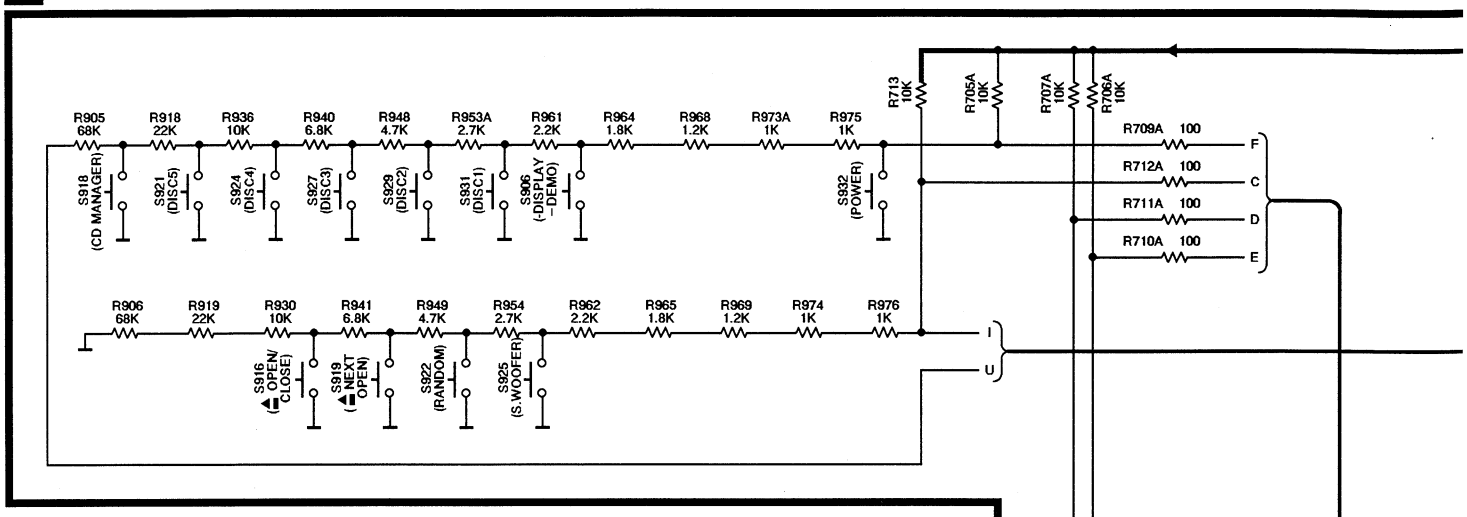
D MECHANISM (DECK2) CIRCUIT
(P.C.Board:on page 58)

E MECHANISM (DECK1) CIRCUIT
(P.C.Board:on page 58)

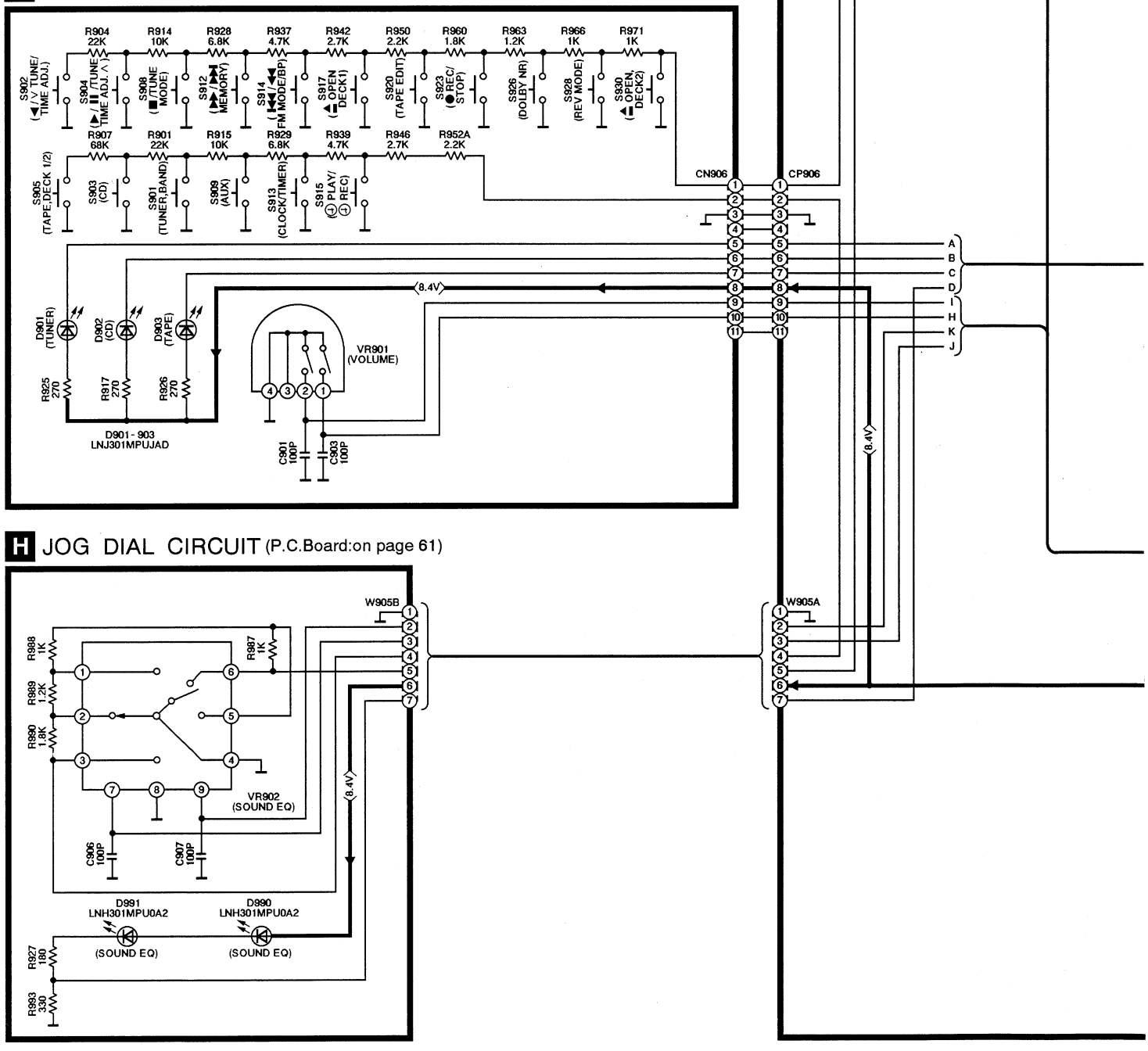
: Positive voltage line : Record signal line : Playback signal line



F FL CIRCUIT (P.C.Board:on page 60)

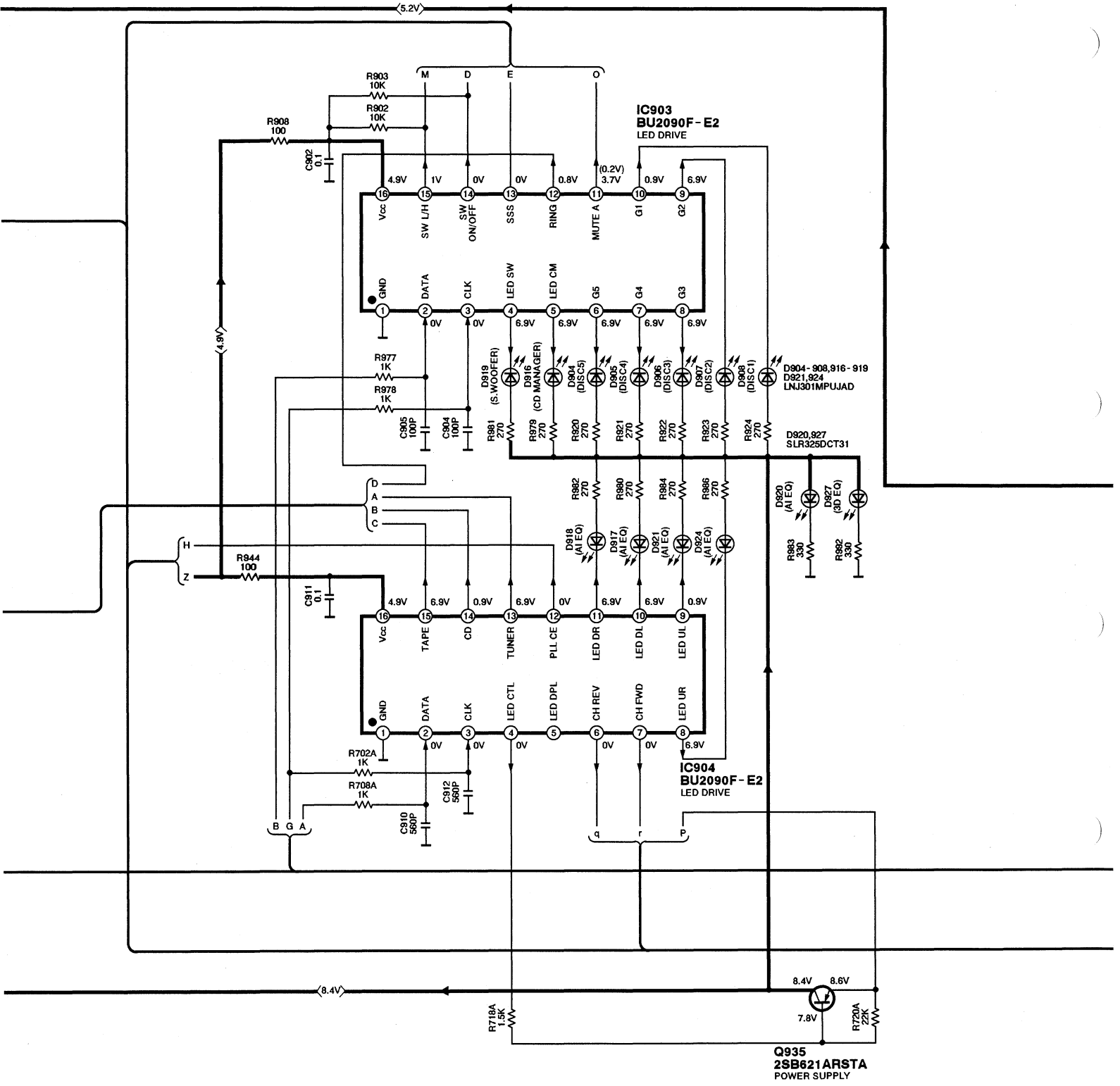


G OPERATION CIRCUIT (P.C.Board:on page 61)

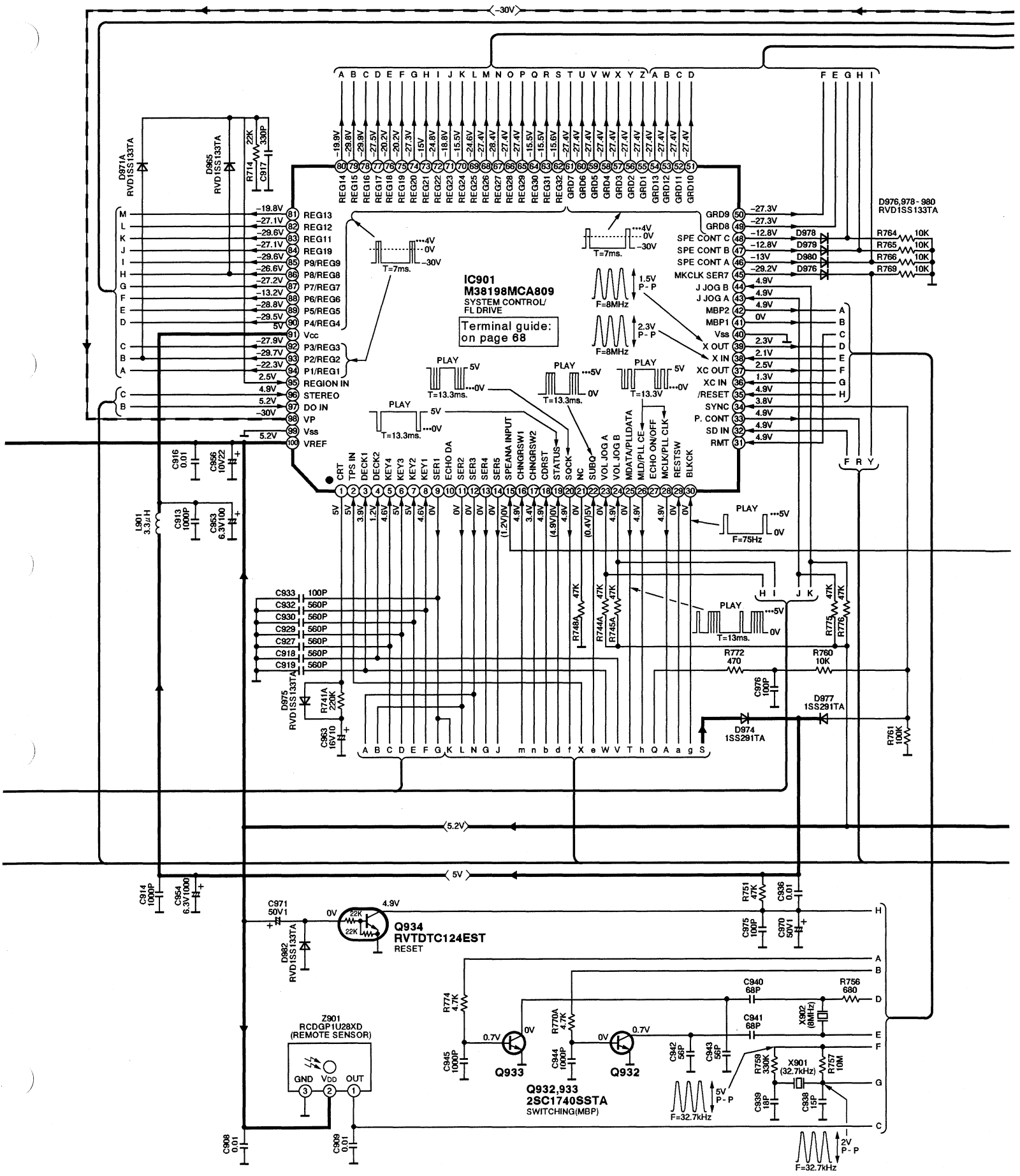


H JOG DIAL CIRCUIT (P.C.Board:on page 61)

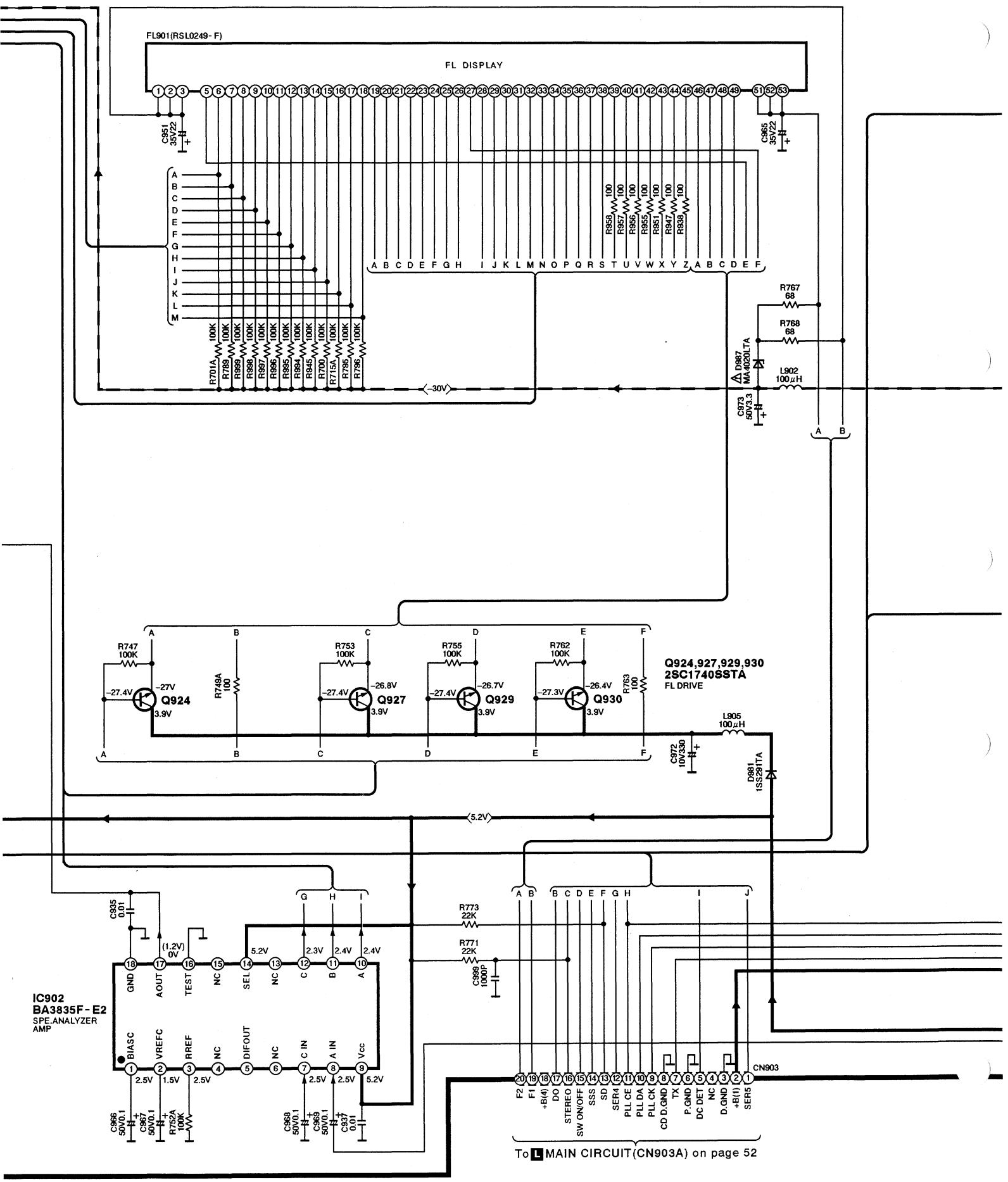
: Positive voltage line : Negative voltage line

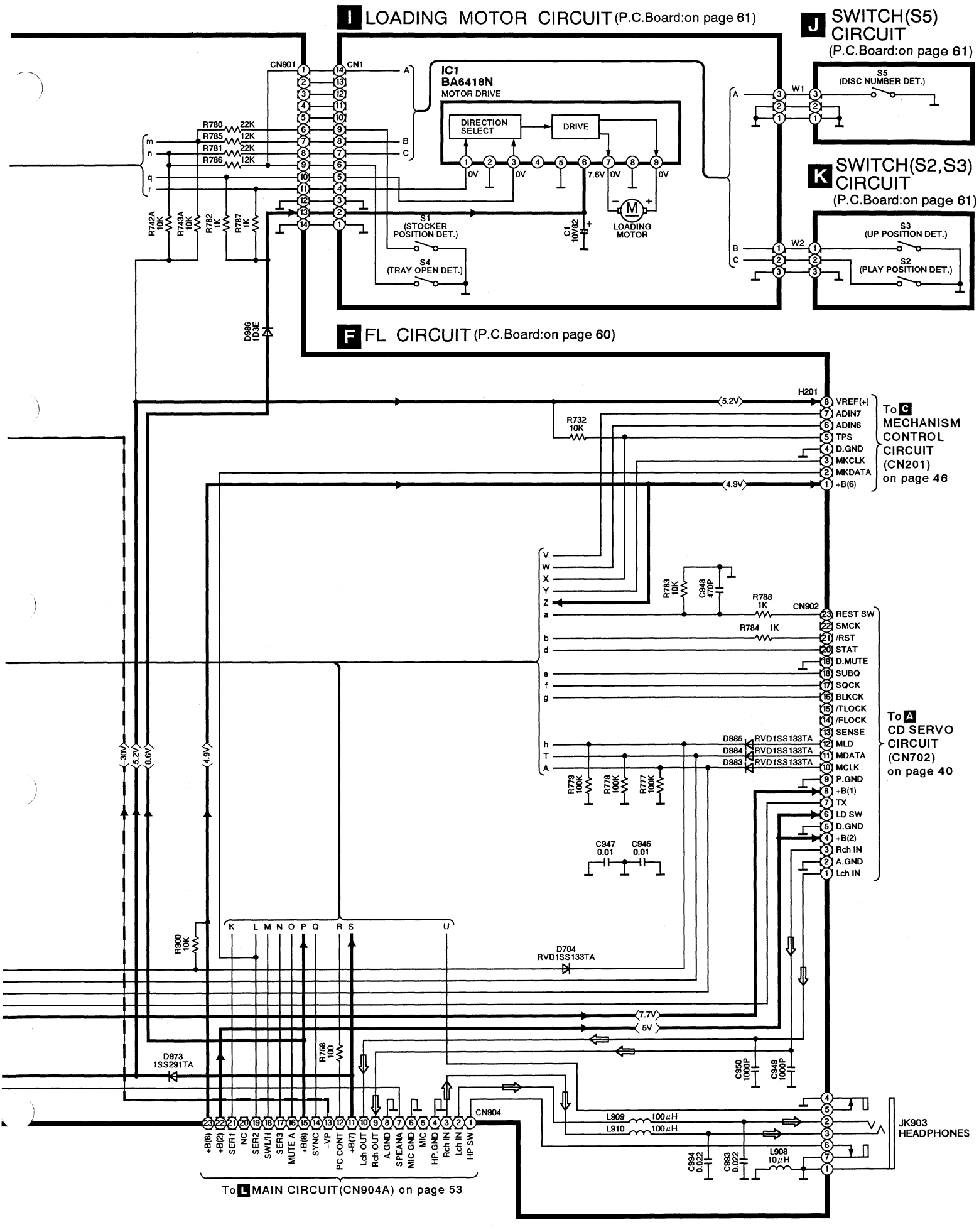


F FL CIRCUIT (P.C.Board:on page 60)

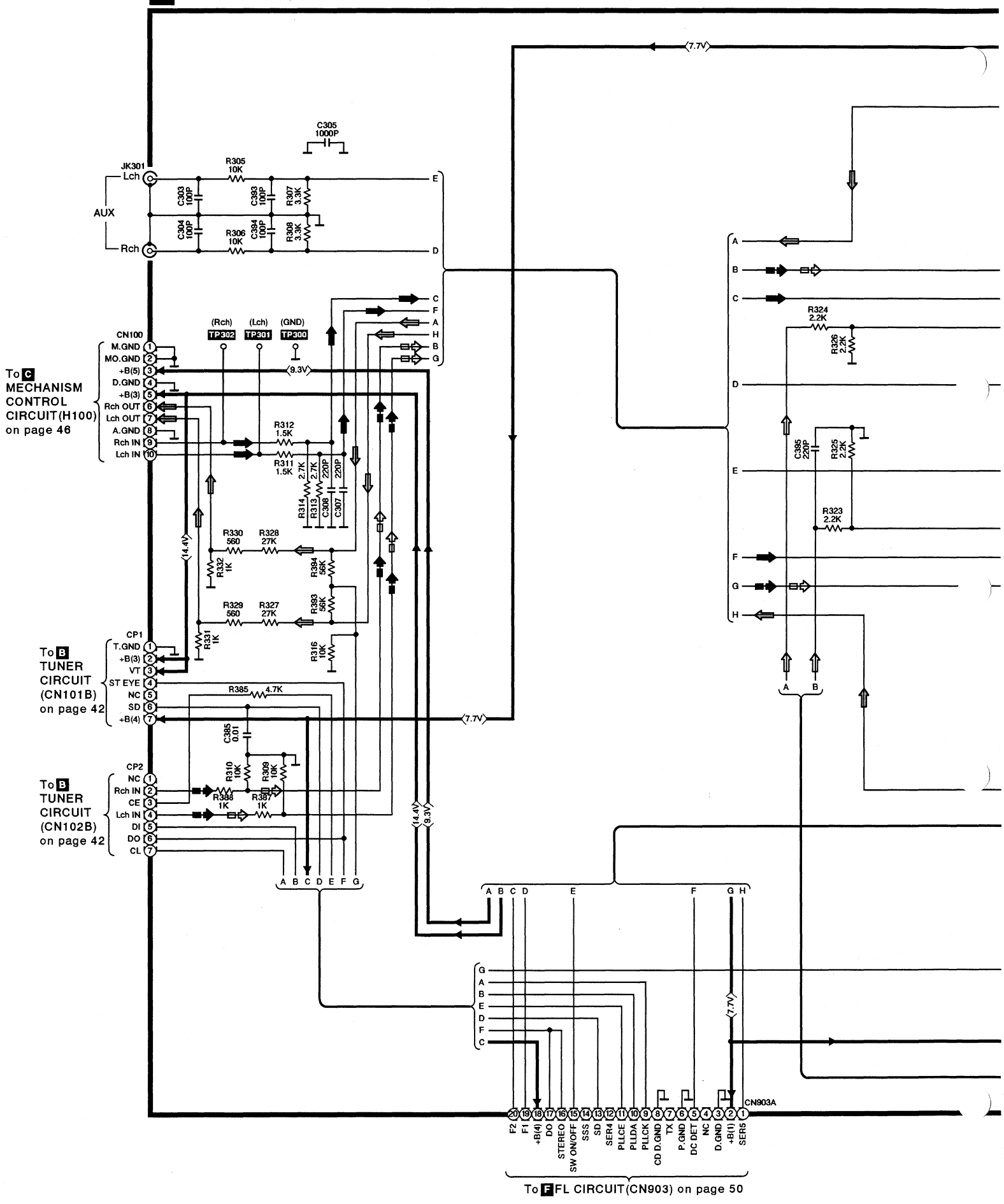


: Positive voltage line : Negative voltage line : CD signal line

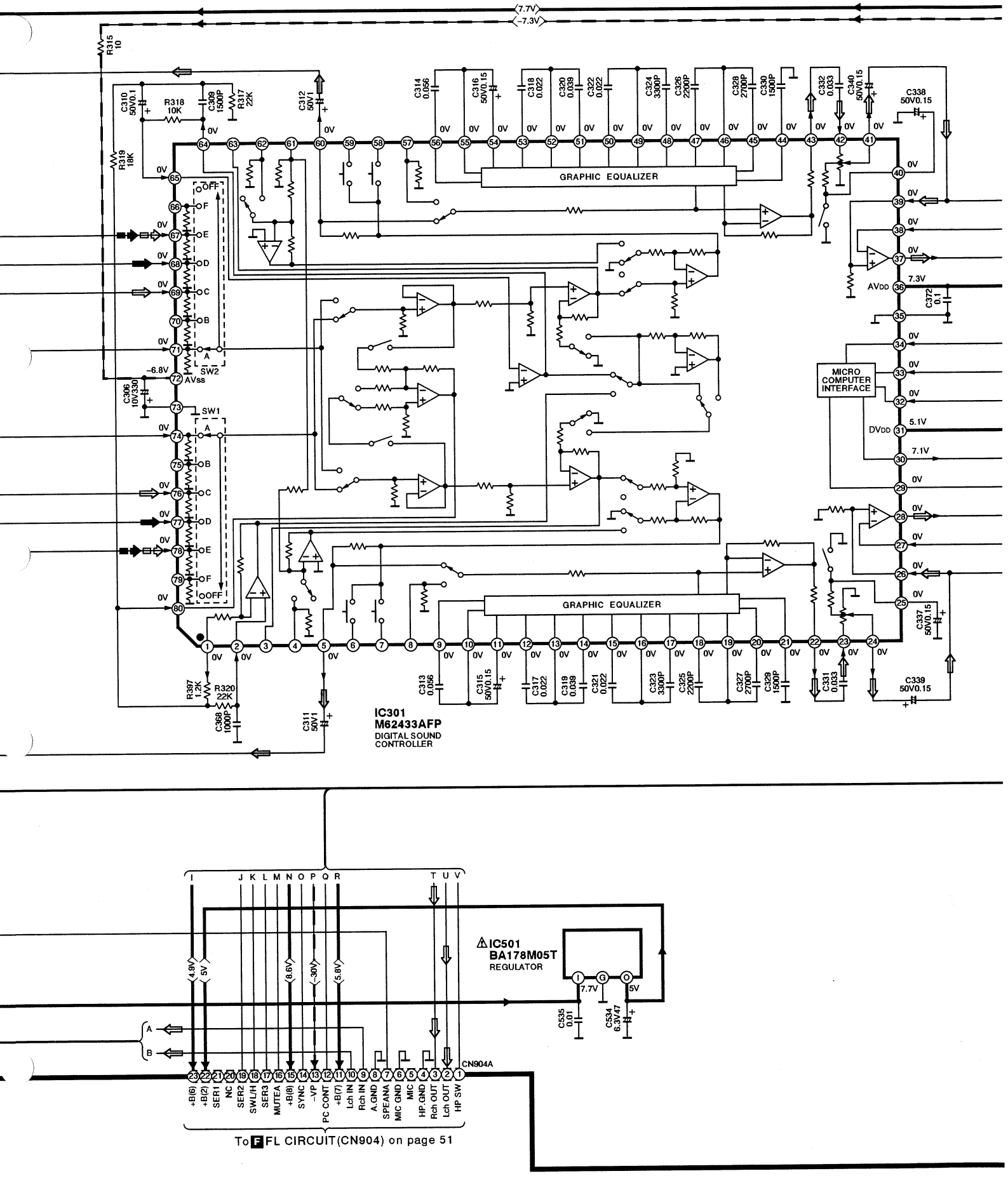



I LOADING MOTOR CIRCUIT (P.C.Board:on page 61)
J SWITCH(S5) CIRCUIT (P.C.Board:on page 61)
K SWITCH(S2,S3) CIRCUIT (P.C.Board:on page 61)
F FL CIRCUIT (P.C.Board:on page 60)
IC1 BA6418N MOTOR DRIVE
DIRECTION SELECT
DRIVE
S1 (STOCKER POSITION DET.)
S4 (TRAY OPEN DET.)
S5 (DISC NUMBER DET.)
S3 (UP POSITION DET.)
S2 (PLAY POSITION DET.)
LOADING MOTOR
To C MECHANISM CONTROL CIRCUIT (CN201) on page 46
To A CD SERVO CIRCUIT (CN702) on page 40
To L MAIN CIRCUIT(CN904A) on page 53
JK903 HEADPHONES
D704 RVD1SS133TA
D973 1SS291TA
D985 RVD1SS133TA
D984 RVD1SS133TA
D983 RVD1SS133TA
D986 1D3E

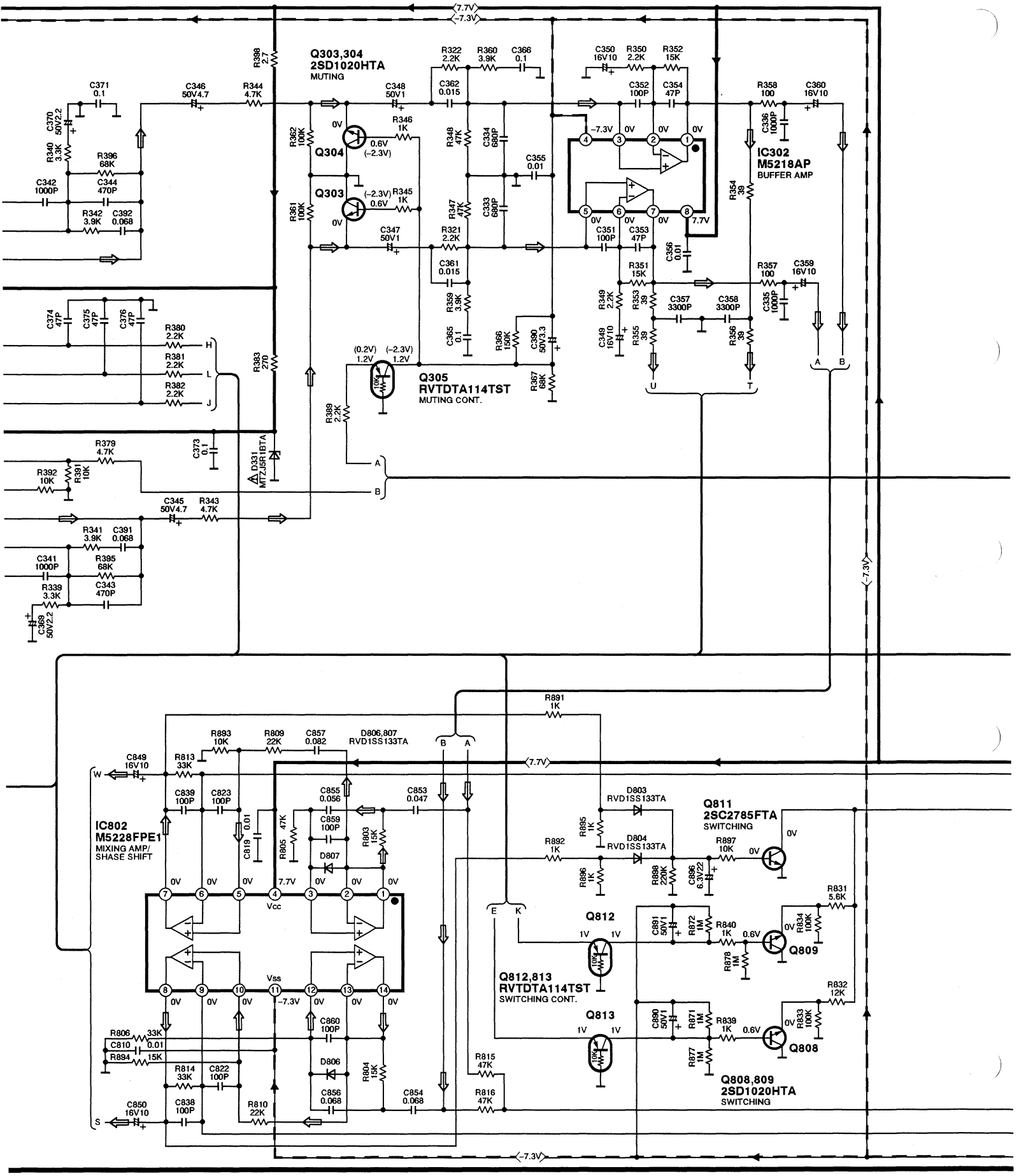
L MAIN CIRCUIT (P.C.Board:on page 62)



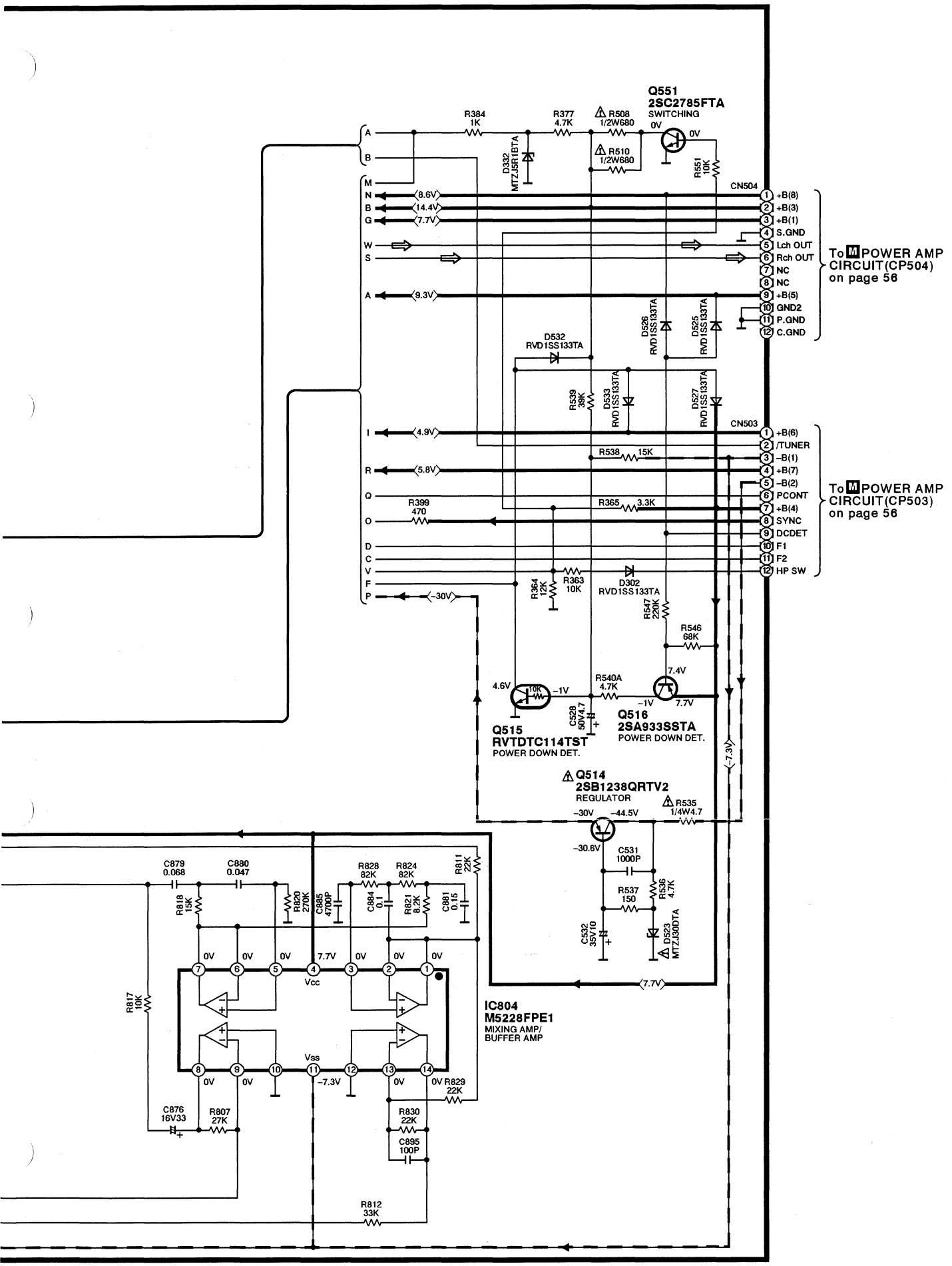
: Positive voltage line
: FM signal line
: Playback signal line
: Negative voltage line
: AM signal line
: CD signal line
: Record signal line



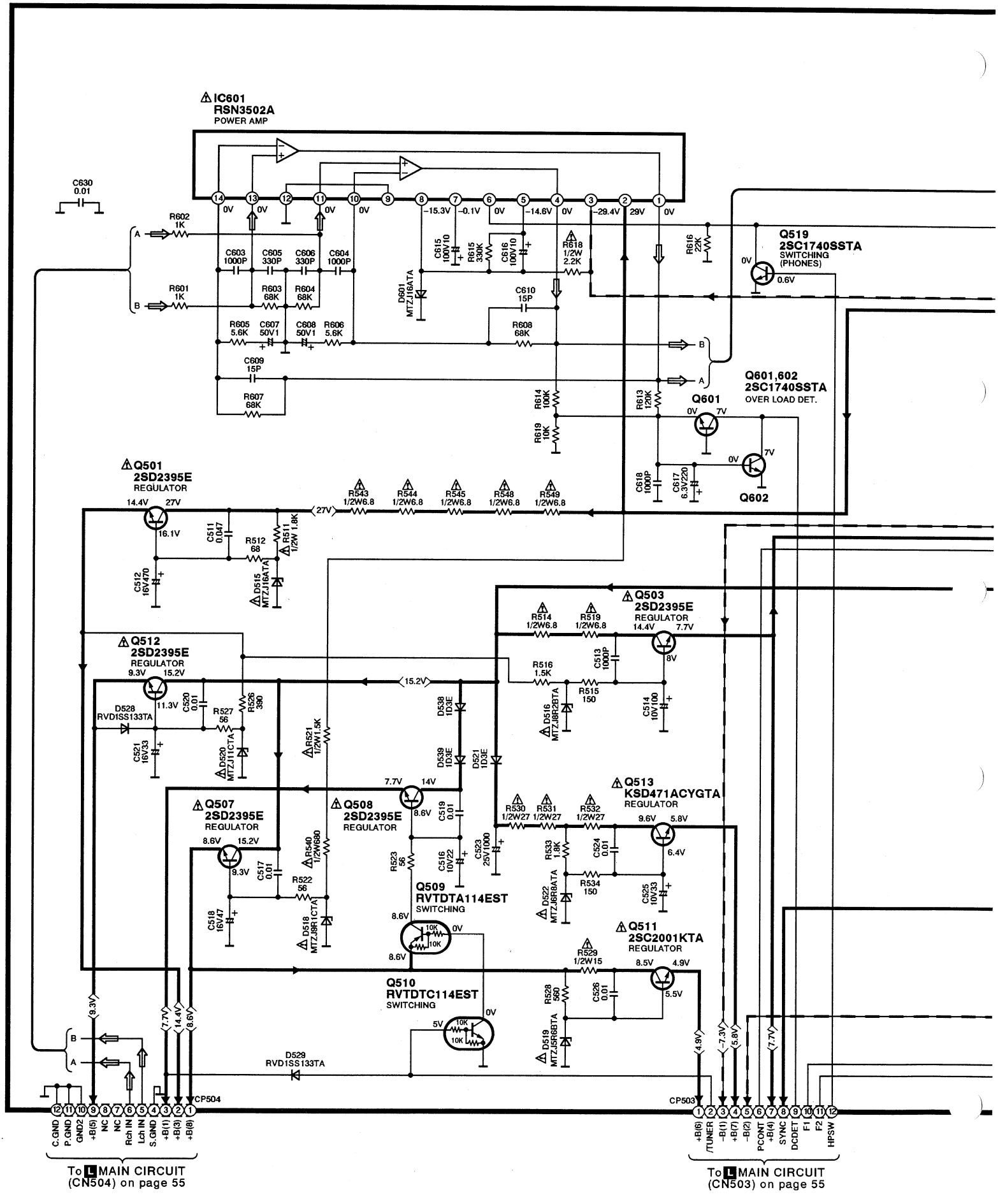
L MAIN CIRCUIT (P.C.Board:on page 62)



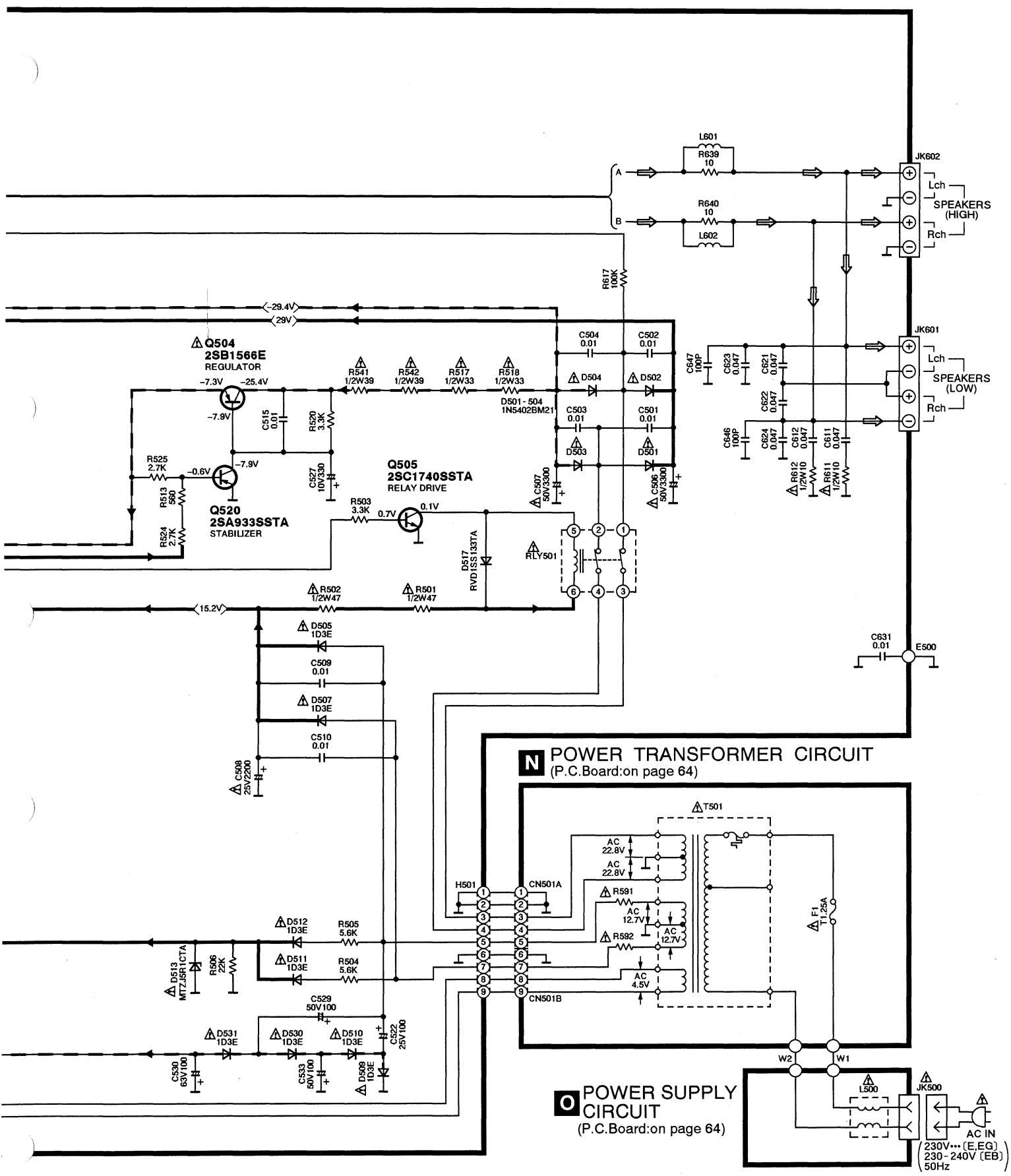
: Positive voltage line : Negative voltage line : CD signal line



M POWER AMP CIRCUIT (P.C.Board:on page 63)



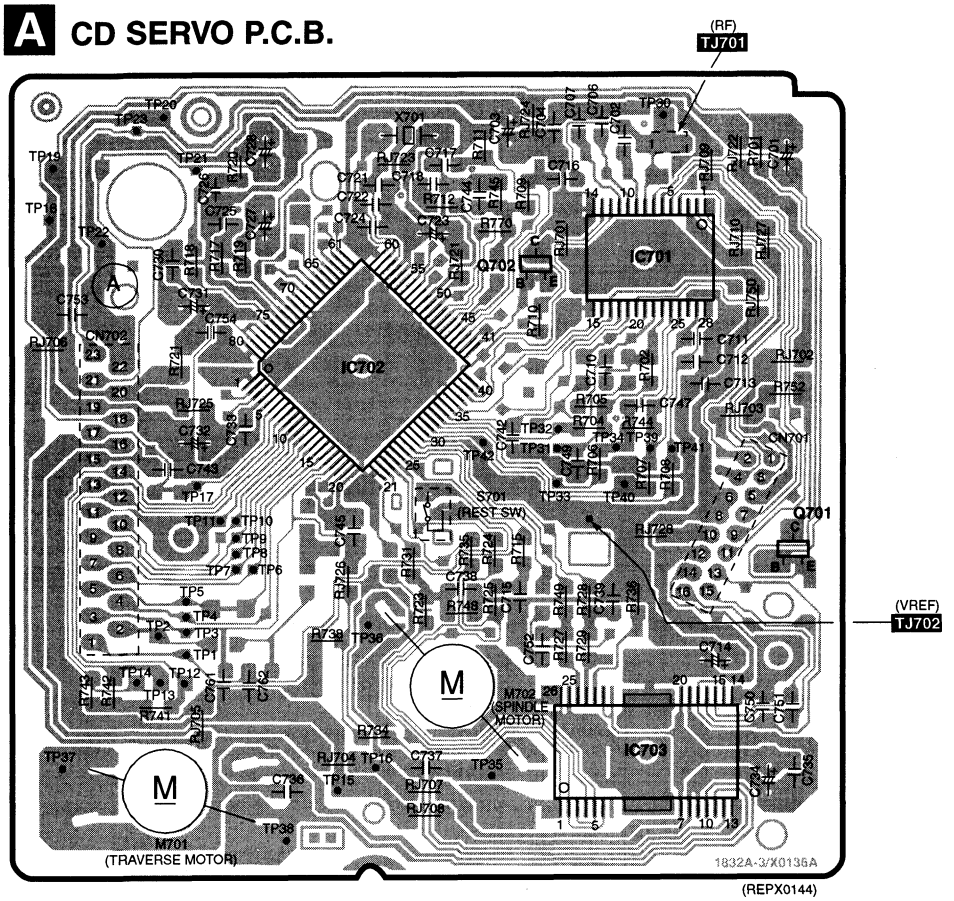
: Positive voltage line : Negative voltage line : CD signal line



■ Printed Circuit Board Diagram

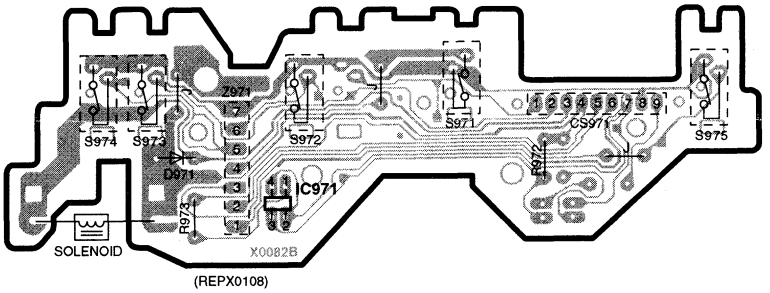
• This circuit board diagram may be modified at any time with the development of new technology.

A CD SERVO P.C.B.



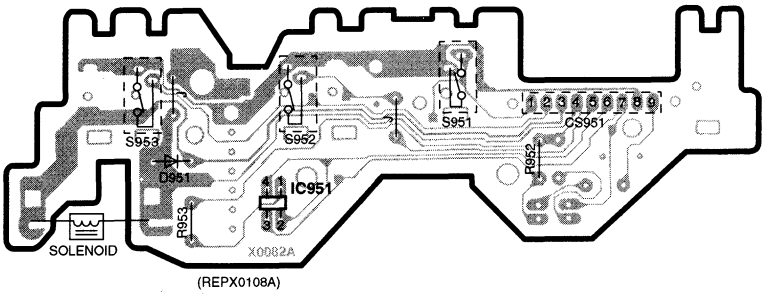
(REPX0144)

D MECHANISM (DECK2) P.C.B.



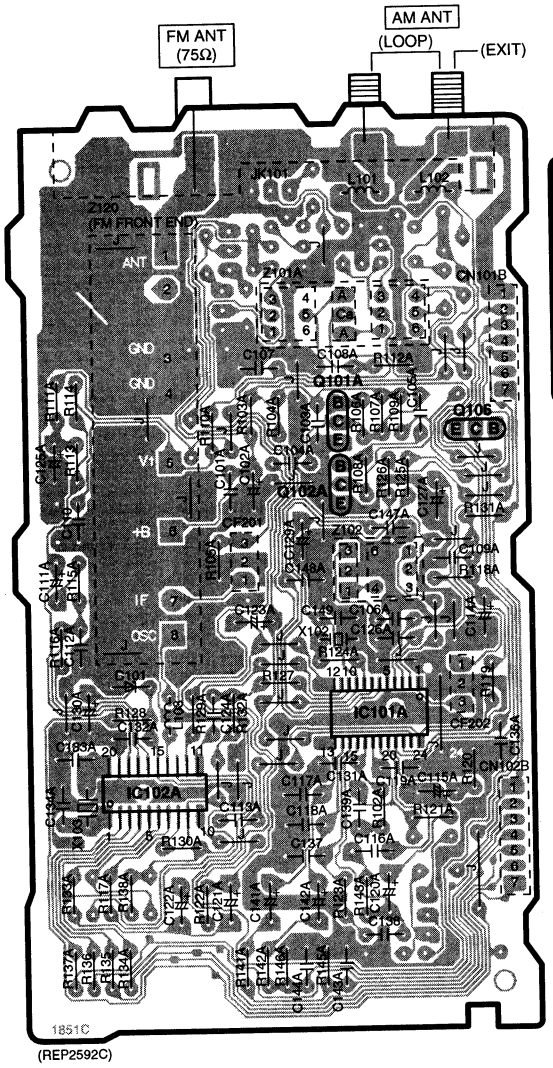
(REPX0108)

E MECHANISM (DECK1) P.C.B.

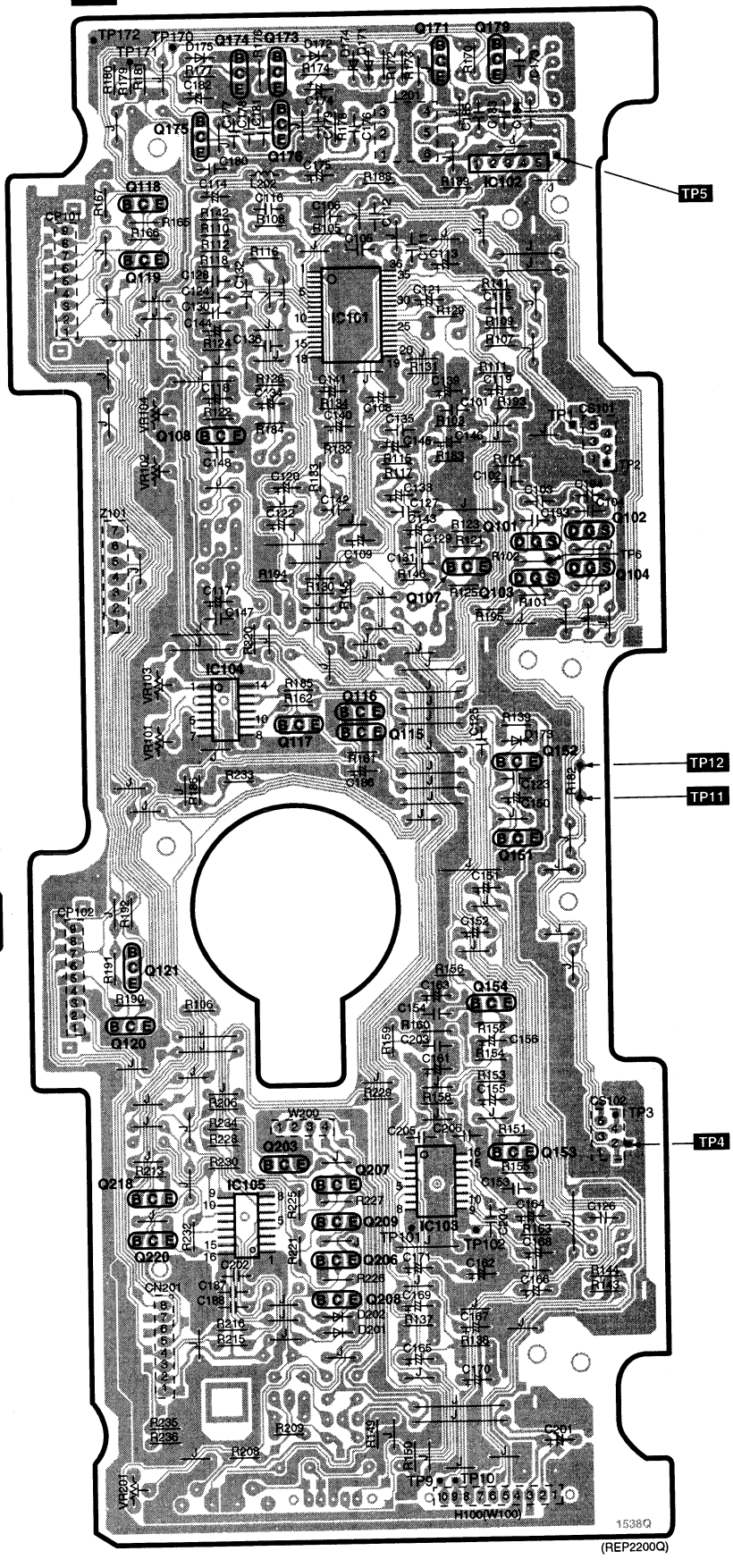


(REPX0108A)

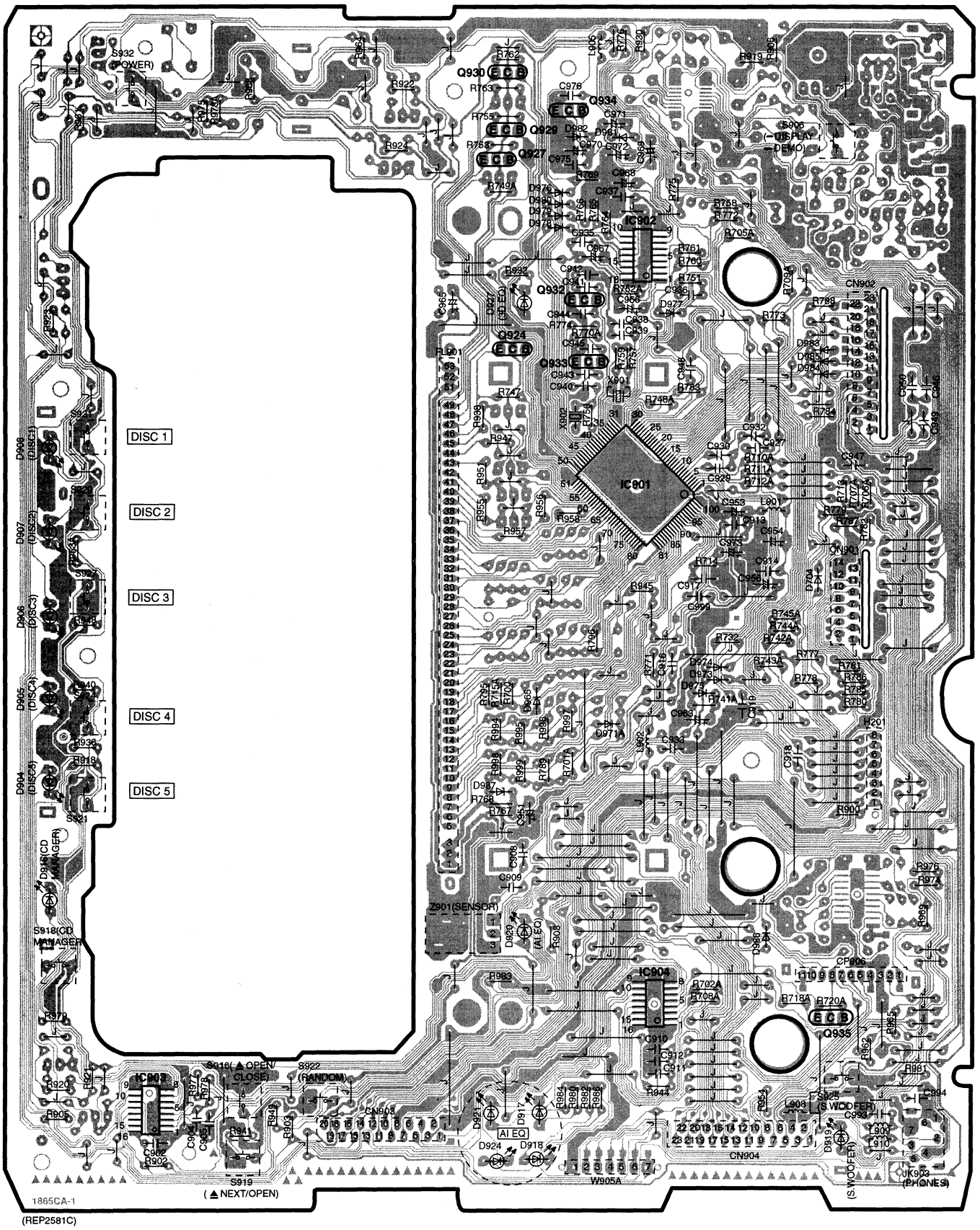
B TUNER P.C.B.



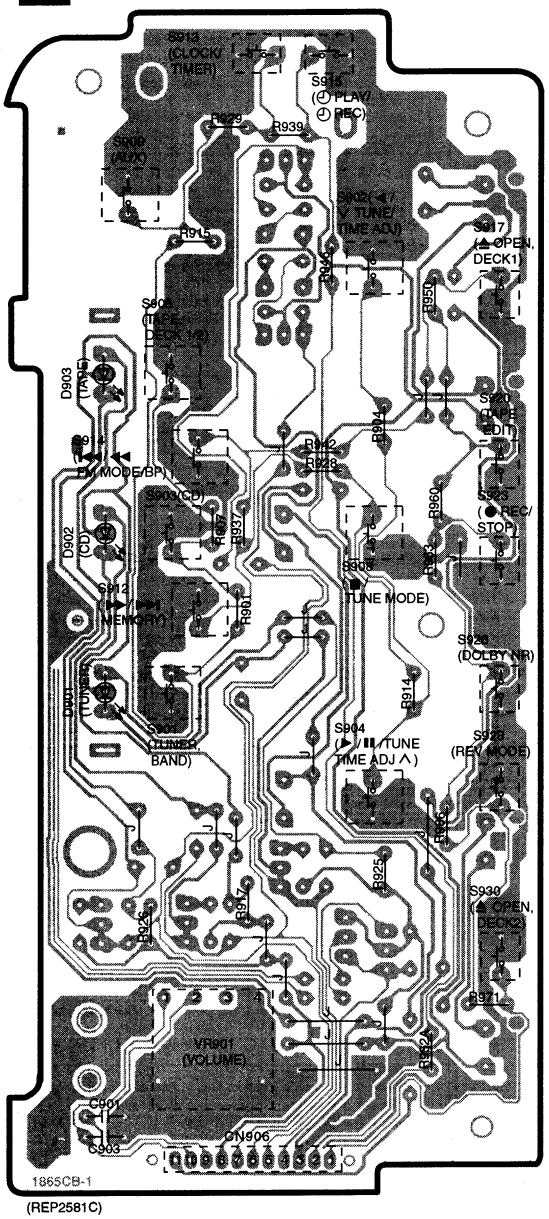
C MECHANISM CONTROL P.C.B.



F FL P.C.B.

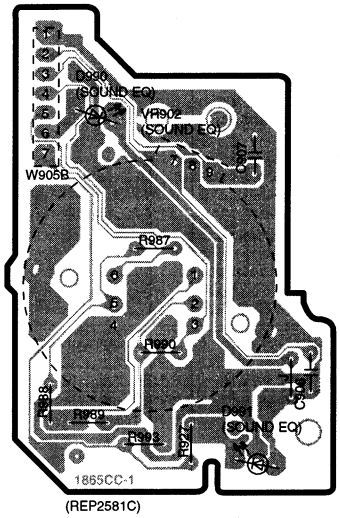

DISC 1
DISC 2
DISC 3
DISC 4
DISC 5
IC901
IC902
IC903
IC904
Q930
Q934
Q929
Q927
Q932
Q924
Q933
Q935
S932 (POWER)
S906 (DISPLAY/DEMO)
S916(▲OPEN/CLOSE)
S922 (RANDOM)
S919 (▲NEXT/OPEN)
S918(CD MANAGER)
Z901(SENSOR)
CN901
CN902
CN903
CN904
CP906
W905A
JK902 (PHONES)
(S WOOFER)
AI EQ
1865CA-1
(REP2581C)

G OPERATION P.C.B.



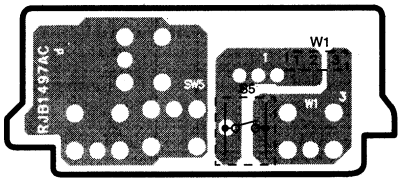
(REP2581C)

H JOG DIAL P.C.B.



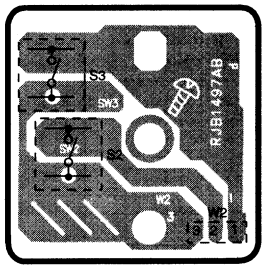
(REP2581C)

J SWITCH (S5) P.C.B.



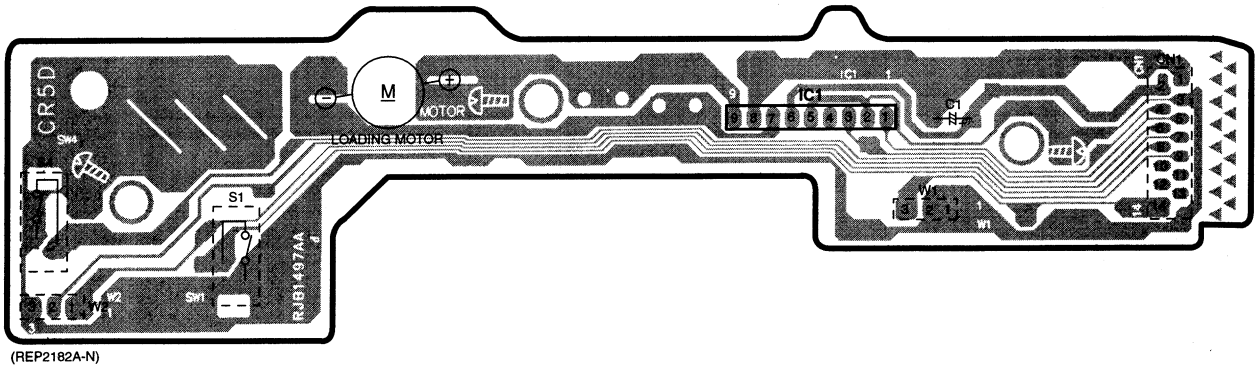
(REP2182A-N)

K SWITCH (S2,S3) P.C.B.



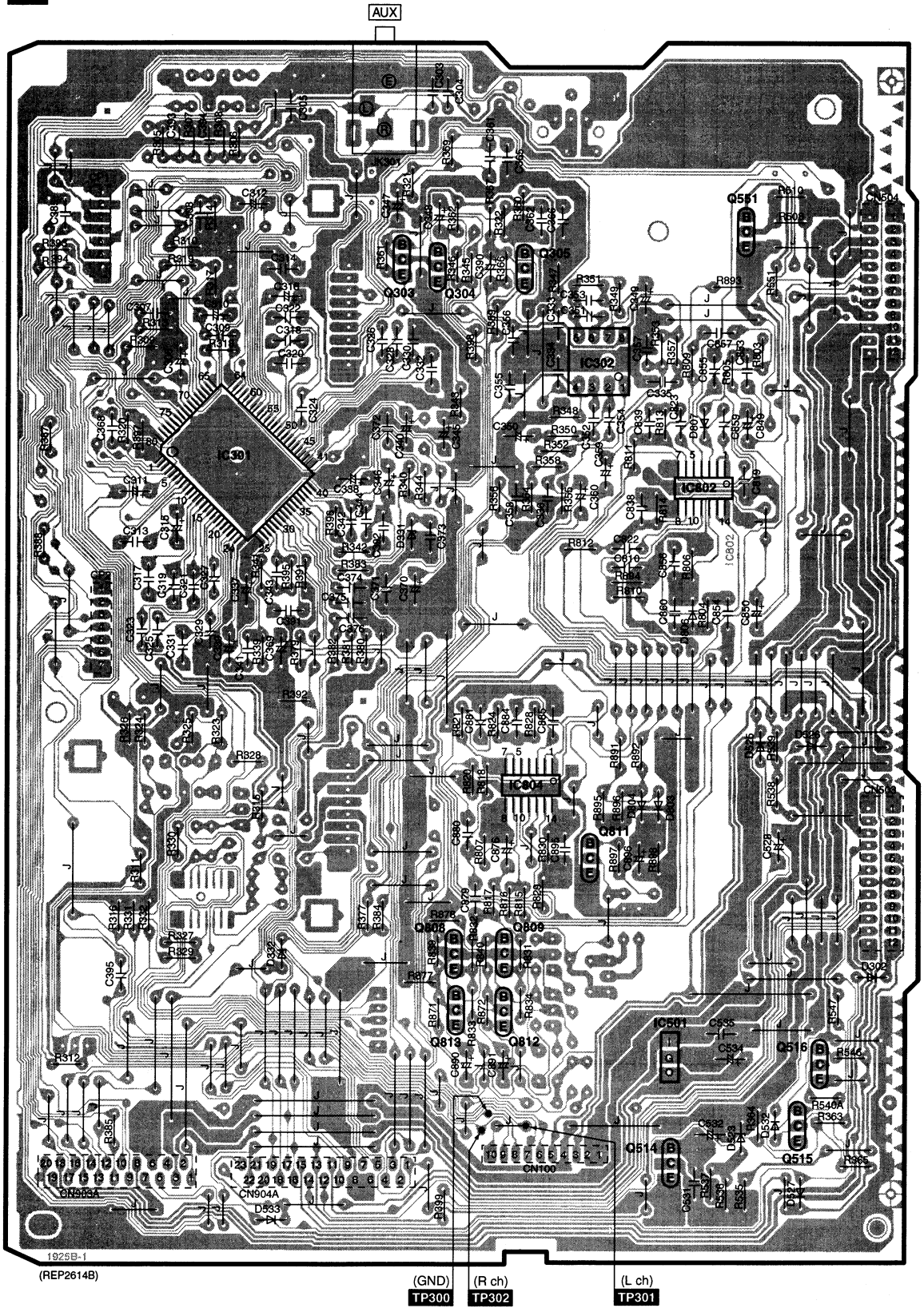
(REP2182A-N)

I LOADING MOTOR P.C.B.

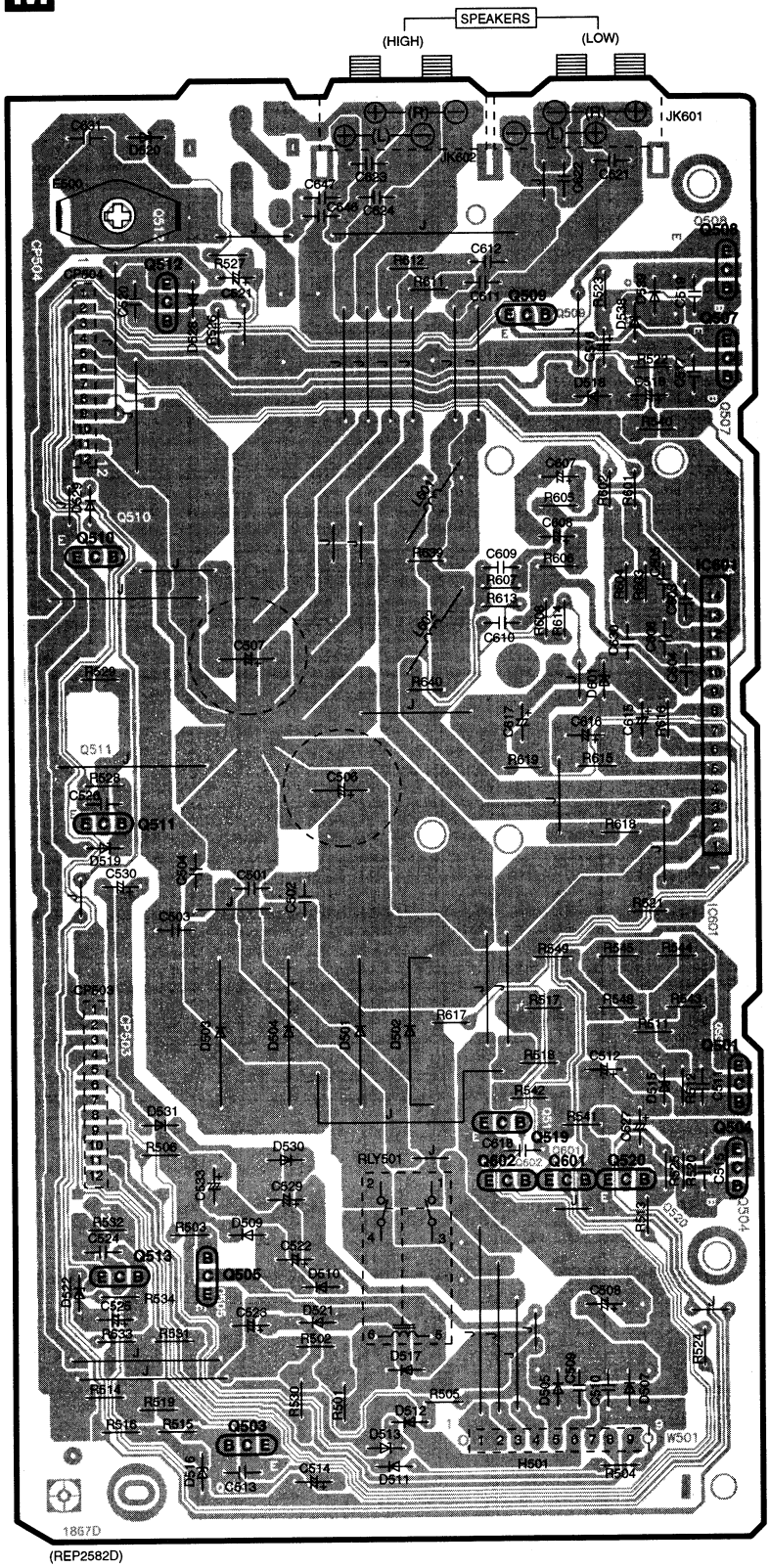


(REP2182A-N)

L MAIN P.C.B.

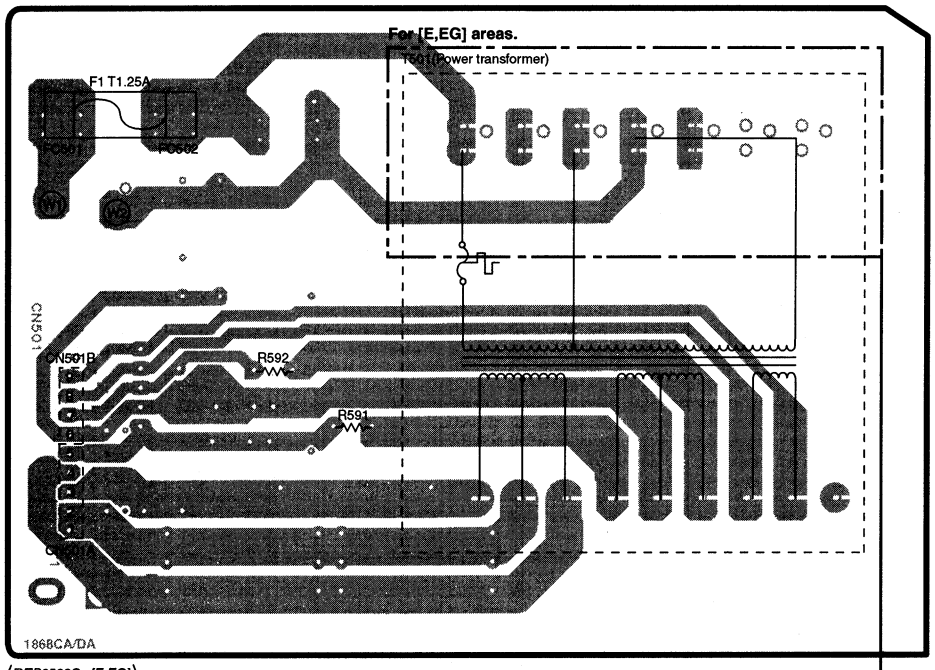

AUX
IC301
IC302
IC802
IC804
IC501
Q303
Q304
Q305
Q551
Q811
Q808
Q809
Q813
Q812
Q514
Q515
CN100
CN903A
CN904A
D533
1925B-1
(REP2614B)
(GND)
TP300
(R ch)
TP302
(L ch)
TP301

M POWER AMP P.C.B.



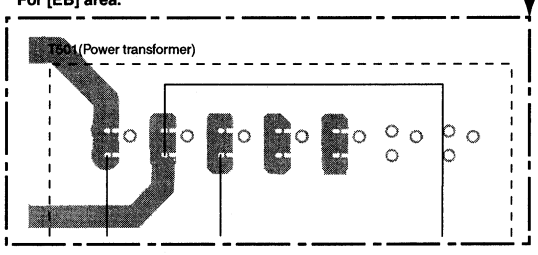
(REP2582D)

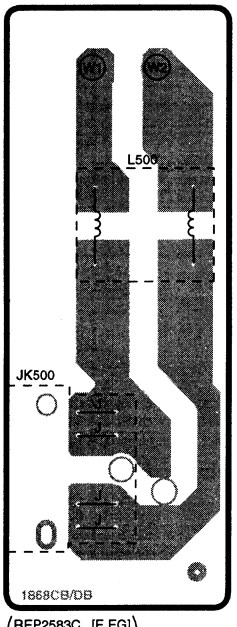
N POWER TRANSFORMER P.C.B.



(REP2583C...[E,EG]
REP2583D...[EB])

O POWER SUPPLY P.C.B.

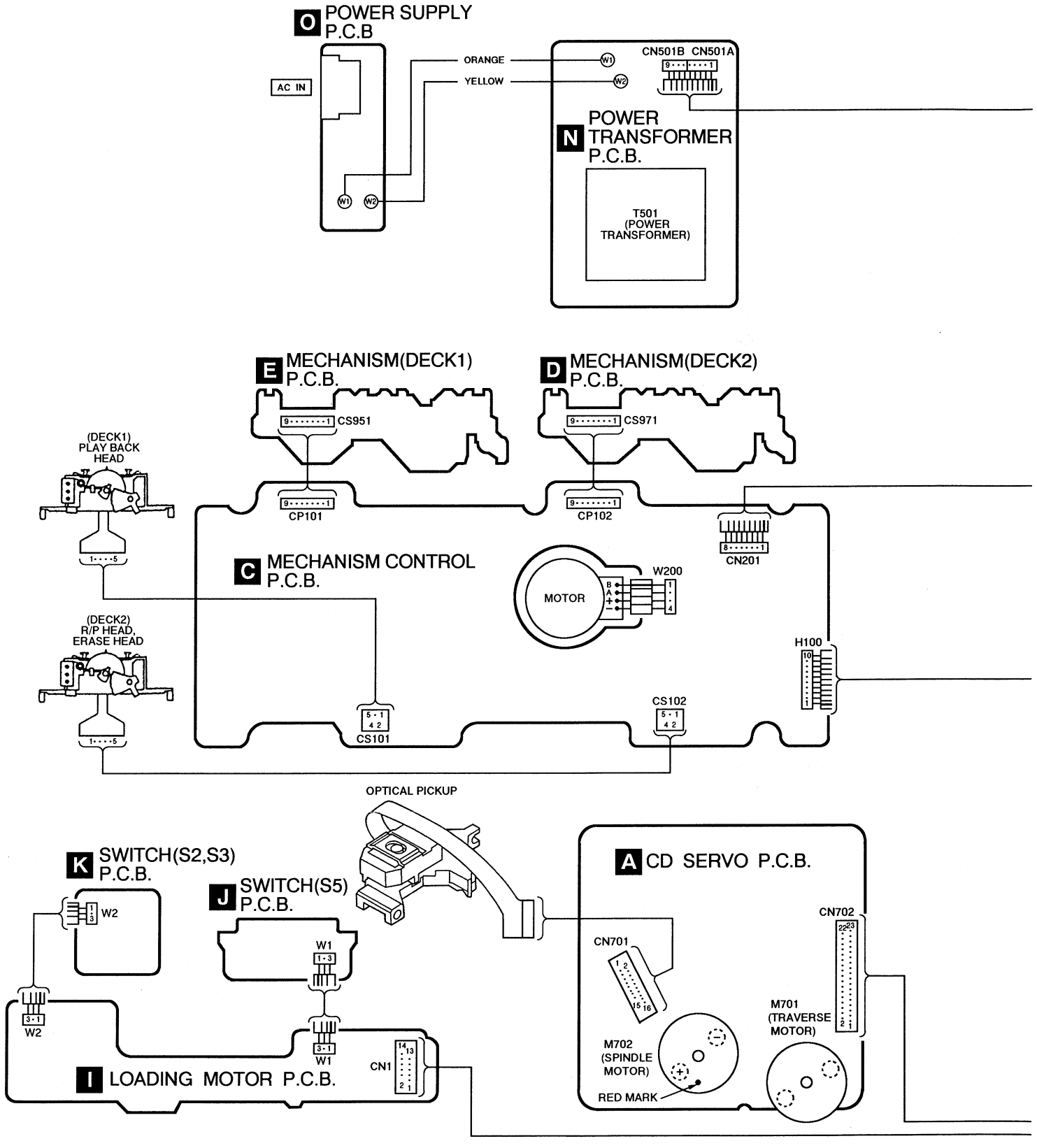


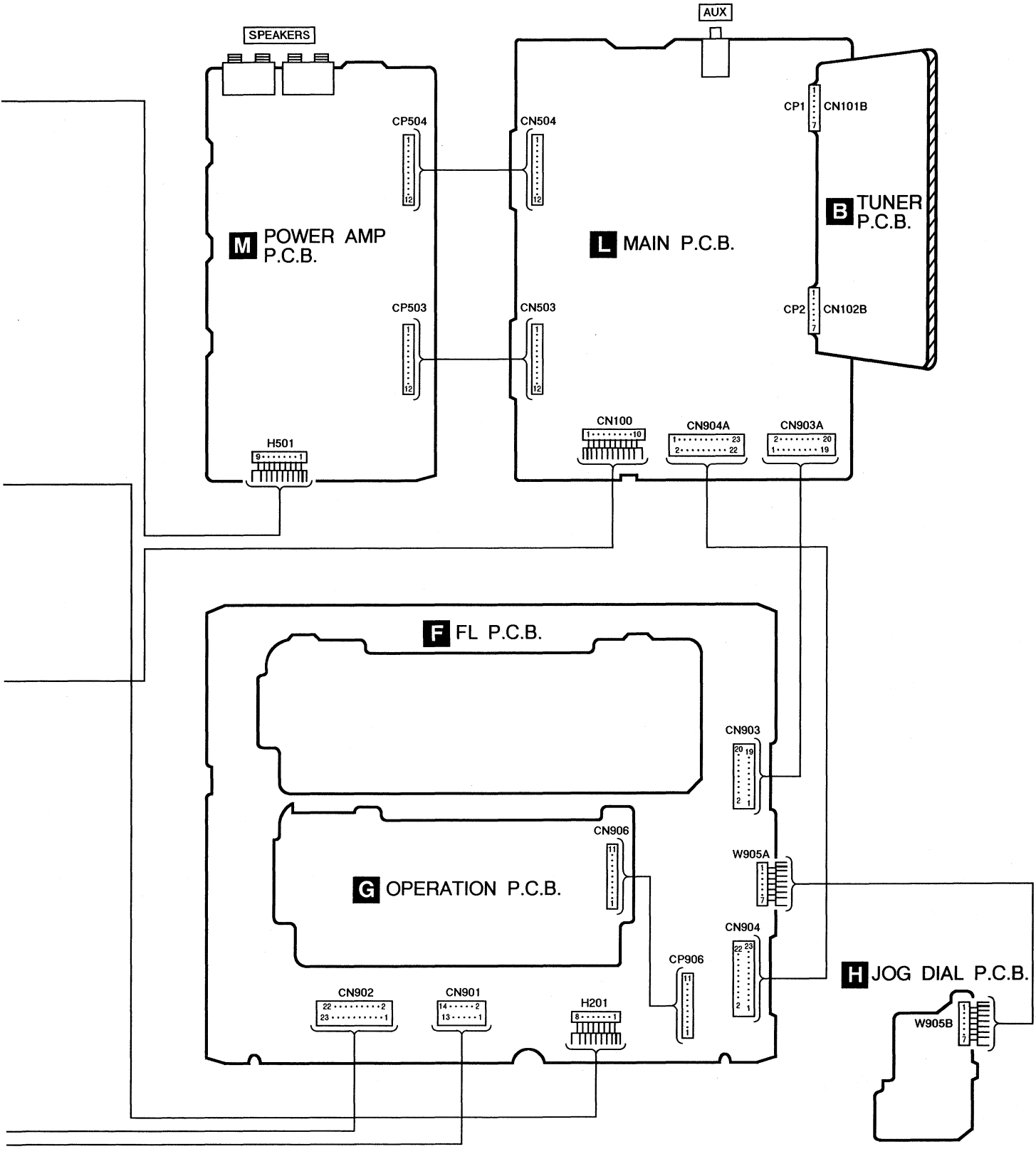


AC IN
(230V...[E,EG]
230-240V...[EB]
50Hz)

(REP2583C...[E,EG]
REP2583D...[EB])

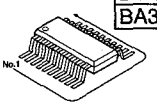
■ Wiring Connection Diagram



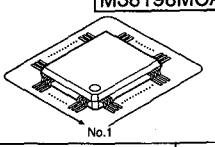

SPEAKERS
AUX
CP504
CN504
CP1
CN101B
M POWER AMP P.C.B.
L MAIN P.C.B.
B TUNER P.C.B.
CP503
CN503
CP2
CN102B
CN100
CN904A
CN903A
H501
F FL P.C.B.
CN903
CN906
W905A
G OPERATION P.C.B.
CN904
CP906
H JOG DIAL P.C.B.
CN902
CN901
H201
W905B

■ Type illustration of IC's, Transistors and Diodes

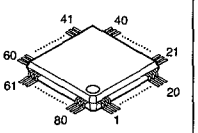
M5228FPE1	14PIN	BU4066BCF-E2	14PIN
BU2040F-E2	16PIN	LC72131MDTRM	20PIN
BU2090F-E2	16PIN	AN8837SBE1	28PIN
BA3835F-E2	18PIN	M51167BFP-TB	36PIN
		CXA1102M-T4	16PIN



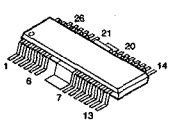
M62433AFP	80PIN
M38198MCA809	100PIN



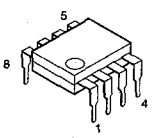
MN662746RPK1



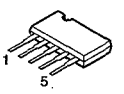
AN8780NSBE2



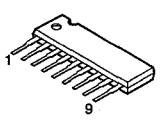
M5218AP



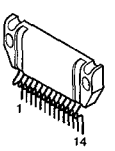
BA7755A



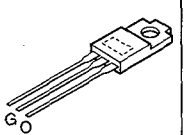
BA6418N



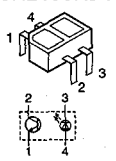
RSN3502A



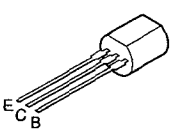
BA178M05T



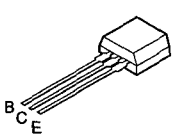
0N2180RLC



2SB621ARSTA
2SB621RTA
2SC2001KTA
2SD1302STA
2SD965RTA
KSD471ACYGTA

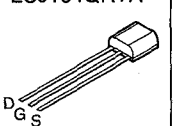


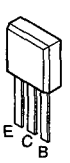
2SC1740SLNET



2SA933SSTA
2SC1740SSTA
RVTDTA114EST
RVTDTA114TST
RVTDTC114EST
RVTDTC114TST
RVTDTC124EST

2SJ164QRTA





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2SD1020HTA
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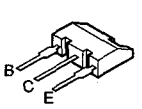
BA1L4MTA
BA1L4ZTA
BN1A4MTA
BN1L3NTA

2SB1238QRTV2



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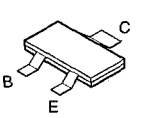

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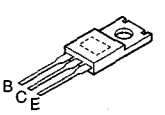

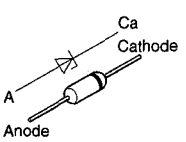

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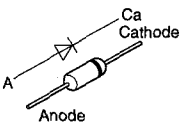
MTZJ4R7BTA
MTZJ5R1BTA
MTZJ5R1CTA
MTZJ5R6BTA
MTZJ6R8ATA

MTZJ8R2BTA
MTZJ9R1CTA
MTZJ11CTA
MTZJ16ATA
MTZJ30DTA



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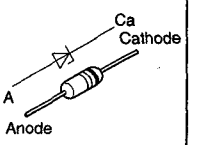
RVD1SS133TA

MA4020LTA



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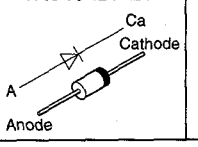

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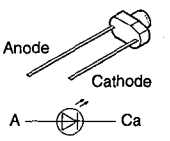

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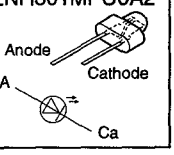


■ Terminal Function of IC's

• IC901 (M38198MCA809): System control / LCD drive

Pin No.	Terminal Name	I/O	Function
1	CRT	I/O	CRT timer
2	TPS IN	I	TPS signal input
3	DECK1	I	Deck 1 mechanism condition input
4	DECK2	I	Deck 2 mechanism condition input
5-8	KEY4-KEY1	I	Operation switch signal input
9	SER1	O	Serial clock output for IC903 and IC904
10	ECHO DT	O	Echo level control signal output (No used, open)
11	SER2	O	Serial data/clock output for IC301 and IC903
12	SER3	O	Serial data output for IC301 and IC904
13	SER4	O	Serial clock output (No used, open)
14	SER5	O	Latch signal output for digital sound controller (IC301)
15	SPEANA INPUT	I	Spectrum analyzer signal input
16	CHNGRSW1	I	Up position detect switch (S3) signal input
17	CHNGRSW2	I	Play position detect switch (S2) signal input
18	CDRST	O	Reset signal output for CD circuit
19	STATUS	I	Status signal input from CD circuit
20	SQCK	O	CD subcode clock output
21	NC	–	No used, connected to GND
22	SUBQ	I	CD subcode data input
23	JOGA	I	Volume control signal input
24	JOGB	I	
25	MDATA /PLLDATA	O	CD command data output and tuner PLL data output
26	MLD /PLLCE	O	CD command load signal output and tuner chip enable output
27	ECHO	O	Echo ON/OFF control signal output (No used, open)
28	MCLK /PLLCLK	O	CD command clock output and tuner PLL clock output
29	REST SW	I	Rest switch (S701) signal input
30	BLKCK	I	CD subcode block clock input
31	RMT	I	Remote controller signal input

Pin No.	Terminal Name	I/O	Function
32	SD IN	I	Station detector signal input for tuner circuit
33	P. CONT	O	Power control signal output
34	SYNC	I	AC power source detect signal input
35	/RESET	I	System reset signal input
36	XCIN	I	Oscillator connection (Sub clock : 32.768 kHz)
37	XCOUT	O	
38	XIN	I	Oscillator connection (Main clock : 6.0 kHz)
39	XOUT	O	
40	VSS	–	GND
41	MBP1	O	Beat proof control signal output
42	MBP2	O	
43	J JOGA	I	AI Equalizer control signal input
44	J JOGB	I	
45	MKCLK	O	Deck control clock output
46	SPE CONT A	O	Spectrum analyzer band control signal output
47	SPE CONT B	O	
48	SPE CONT C	O	
49-61	GRD-GRD1	O	LCD grid signal output
62-90	REG32-REG4	O	LCD segment signal output
91	VCC	I	Power supply (+5V)
92-94	REG3-REG1	O	LCD segment signal output
95	REGION IN	I	Region select signal input
96	STEREO IN	I	Tuner stereo signal detect input
97	DO IN	I	Tuner PLL IF data input
98	VP	–	Power supply (–30V)
99	VSS	–	GND
100	VREF	I	Reference voltage input

• IC701 (AN8837SBE1) : Servo Amp.

Pin No.	Terminal Name	I/O	Function
1	PDE	I	Tracking signal input terminal 1 (E ch)
2	PDF	I	Tracking signal input terminal 2 (F ch)
3	VCC	I	Power supply terminal
4	PDA	I	Focus signal input terminal 1 (A ch)
5	PDB	I	Focus signal input terminal 2 (B ch)
6	LPD	I	Laser PD signal
7	LD	O	Laser power auto control output
8	RF	O	RF amp terminal
9	RF IN	I	AGC input terminal
10	CSBRT	I	OFTR capacitor connection terminal
11	CEA	I	HPF-AMP capacitor connection terminal
12	BDO	O	Dropout detection control
13	LDON	I	LD APC ON/OFF ("H": ON, "L": OFF)
14	GND	—	GND terminal
15	/RFDET	O	RF det. signal output terminal ("L": det.)
16	CROSS	O	Tracking error zero cross output
17	OFTR	O	Off track detection ("H": det.)
18	VDET	O	Oscillation det. signal ("H": det.)
19	ENV	O	Envelope signal output terminal
20	ENVOFF	I	Not used, connected to power supply
21	TEBPF	O	Oscillation detect input terminal
22	TEN	I	Tracking error signal
23	TEOUT	O	Tracking error signal
24	FEOUT	O	Focus error signal
25	FEN	I	Focusing error signal
26	VREF	O	Reference voltage output terminal
27	TBAL	I	Tracking balance adj. input
28	FBAL	I	Focus balance adj. input

• IC702 (MN662746RPK1) : Servo Processor, Digital Signal Processor, Digital Filter, D/A Converter

Pin No.	Terminal Name	I/O	Function
1	BCLK	–	Bit clock output for serial data (not used, open)
2	LRCK	–	L/R clock signal output (not used, open)
3	SRDATA	–	Serial data output (not used, open)
4	$DV_{DD}1$	I	Power supply input (for digital circuit)
5	DVss1	—	GND (for digital circuit)
6	TX	O	Digital audio interface signal output
7	MCLK	I	Microprocessor command clock signal input (Latches data at first transition)
8	MDATA	I	Microprocessor command data signal input
9	MLD	I	Microprocessor command load signal input
10	SENSE	–	Sense signal output (OFT, FESL, MAGEND, NAJEND, POSAD, SFG) (Not used, open)
11	/FLOCK	–	Focus servo feeding signal output ("L": Feed) (Not used, open)
12	/TLOCK	–	Tracking servo feeding signal output ("L": Feed) (Not used, open)
13	BLKCK	O	Sub-code block clock signal output (fBLKCK = 75 Hz during normal playback)
14	SQCK	I	External clock signal input for sub-code Q resister
15	SUBQ	O	Sub-code Q code output
16	DMUTE	I	Muting input ("H": Mute)
17	STAT	O	Status signal output (CRC, CUE, CLVS, TTSTVP, FCLV, SQCK)
18	/RST	I	Reset signal input
19	SMCK	—	1/2-divided clock signal of crystal oscillating at MSEL = "H" (fSMCK = 8.4672 MHz) 1/4-divided clock signal of crystal oscillating at MSEL = "L" (fSMCK = 4.2336 MHz) (Not used, open)
20	PMCK	—	1/192-divided clock signal of crystal oscillating (fPMCK = 88.2 kHz) (Not used, open)
21	TRV	–	Traverse forced feed output (Not used, open)
22	TVD	O	Traverse drive output
23	PC	O	Spindle motor ON signal output ("L": ON)
24	ECM	O	Spindle motor drive signal output (forced mode output)
25	ECS	O	Spindle motor drive signal output (servo error signal output)
26	KICK	–	Kick pulse output (Not used, open)
27	TRD	O	Tracking drive output
28	FOD	O	Focus drive output
29	VREF	I	D/A (drive) output (TVD, ECS, TRD, FOD, FBAL, TBAL) reference voltage input
30	FBAL	O	Focus balance adjustment output
31	TBAL	O	Tracking balance adjustment output
32	FE	I	Focus error signal input (analog input)
33	TE	I	Tracking error signal input (analog input)
34	RFENV	I	RF envelope signal input
35	VDET	I	Vibration detection signal input ("H": detection)

IC702 Continued

Pin No.	Terminal Name	I/O	Function
36	OFT	I	Off-track signal input ("H": off track)
37	TRCRS	I	Track cross signal input
38	/RFDET	I	RF detection signal input ("L": detection)
39	BDO	I	Dropout signal input ("H": Dropout)
40	LDON	O	Laser on signal output ("H": ON)
41	TES	O	Tracking error shunt signal output ("H": shunt)
42	PLAY	—	Play signal out ("H": PLAY) (Not used, open)
43	WVEL	—	Double speed status signal output ("H": Double speed) (Not used, open)
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	—	DSL bias (Not used, open)
47	DSLF	I/O	DSL loop filter
48	PLLF	I/O	PLL loop filter
49	DSLF	I/O	DSL loop filter
50	AVDD2	—	Power supply input (for analog circuit)
51	AVss2	—	GND (for analog circuit)
52	EFM	—	EFM signal output (Not used, open)
53	PCK	—	PLL extraction clock output (fPCK= 4.321 MHz during normal playback) (Not used, open)
54	TOUT	—	Phase comparison signal of EFM and PCK signals (Not used, open)
55	SUBC	—	Sub-code serial data output (Not used, open)
56	SBCK	I	Clock input for sub-code serial data
57	Vss	—	GND
58	X1 IN	I	Crystal oscillating circuit input (f = 16.9344 MHz)
59	X2 OUT	O	Crystal oscillating circuit output (f = 16.9344 MHz)
60	VDD	I	Power supply input (for oscillating circuit)
61	BYTCK	—	Byte clock output (Not used, open)
62	/CLDCK	—	Sub-code frame clock signal output (fCLDCK = 7.35 kHz during normal playback) (Not used, open)
63	FCLK	—	Crystal frame clock signal output (fFCLK = 7.35 kHz, double = 14.7 kHz) (Not used, open)
64	IPFLAG	—	Interpolation flag output ("H": Interpolation) (Not used, open)
65	FLAG	—	Flag output (Not used, open)
66	CLVS	—	Spindle servo phase synchronizing signal output ("H": CLV, "L": rough servo) (Not used, open)
67	CRC	—	Sub-code CRC checked output ("H": OK, "L": NG) (Not used, open)
68	RESY	—	De-emphasis ON signal output ("H": ON) (Not used, open)
69	FLAG	—	Frame re-synchronizing signal output (Not used, open)
70	ARST	I	Reset input through MASH circuit ("L": Reset)
71	/TEST	I	Test input
72	AVDD1	—	Power supply input (for analog circuit)
73	OUTL	O	Left channel audio signal output
74	AVss1	—	GND
75	OUTR	O	Right channel audio signal output
76	RSEL	I	RF signal polarity assignment input (at "H" level: RSEL = "H") (at "L" level: RSEL = "L")
77	CSEL	I	Crystal oscillating frequency designation input ("L": 16.9344 MHz, "H": 33.8688 MHz)
78	PSEL	I	Test terminal (Connected to GND)
79	MSEL	I	SMCK oscillating frequency designation input ("L": 4.2336 MHz, "H": 8.4672 MHz)
80	SSEL	I	SUBQ output mode select ("H": Q-code buffer mode)

• IC703 (AN8780NSBE2): Focus Coil / Tracking Coil / Traverse Motor / Spindle Motor Drive

Pin No.	Terminal Name	I/O	Function
1	/RST	—	Not used, open
2	NC	—	Not used
3	IN2	I	Motor driver (2) input
4	PC2	I	Turntable motor drive signal ("L": ON)
5	NC	—	Not used
6	IN1	I	Motor driver (1) input
7	PVcc1	I	Driver power supply terminal (1)
8	PGND1	—	Driver GND terminal (1)
9	NC	—	Not used, connected to GND
10	D1–	O	Motor driver (1) output terminal (–)
11	D1+	O	Motor driver (1) output terminal (+)
12	D2–	O	Motor driver (2) output terminal (–)
13	D2+	O	Motor driver (2) output terminal (+)
14	D3–	O	Motor driver (3) output terminal (–)
15	D3+	O	Motor driver (3) output terminal (+)
16	D4–	O	Motor driver (4) output terminal (–)
17	D4+	O	Motor driver (4) output terminal (+)
18	NC	—	Not used, open
19	PGND2P	—	Driver GND terminal (2)
20	PVcc2	I	Driver power supply (2)
21	VCC	I	Power supply terminal
22	VREF	I	Reference voltage input terminal
23	IN4	I	Motor driver (4) input
24	IN3	I	Motor driver (3) input
25	RSTIN	I	Reset terminal (Not used, connected to GND)
26	NC	—	Not used, connected to GND

■ Measurements and Adjustments

Tuner Section

Measuring Instruments and Special Tools

- AM signal generator (AM-SG)
- EVM-AC (AC Electronic voltmeter)
- EVM-DC (DC Electronic voltmeter)
- Oscilloscope
- Choke coil (100 µH)
- AM loop antenna

Note :

- Trimmer will be instability that once you tighten, please adjust with tighten slowly from loosened condition.
- Adjust OSC coil and IFT with nonmetal driver.

AM IF Adjustment

1. Connect the instrument as shown in Fig. 1.
2. Set the unit to AM mode.
3. Apply signal as shown in Fig. 1 from AM-SG.
4. Adjust **Z102** so that the output frequency is maximized in Fig. 2.

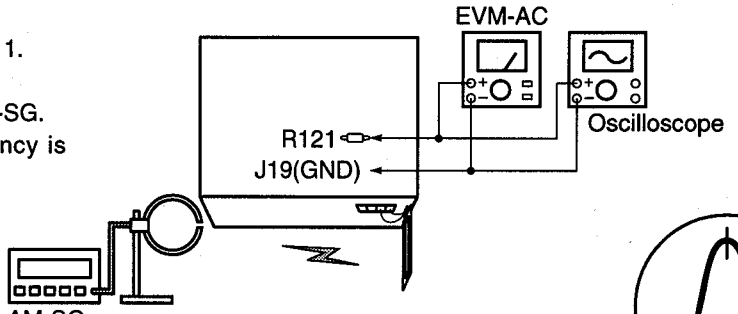


Fig. 1

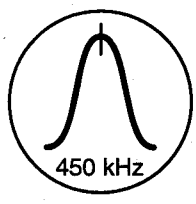


Fig. 2

AM RF Adjustment

1. Connect the instrument as shown in Fig. 3.
2. Set the unit to AM mode.
3. Set AM-SG to 522 kHz.
4. Receive 522 kHz in the unit.
5. Adjust **Z101 (OSC)** so that the EVM-AC is maximized.
6. Set AM-SG to 603 kHz.
7. Receive 603 kHz in the unit.
8. Adjust **Z101 (ANT)** so that the EVM-AC is maximized.
9. Set AM-SG to 522 kHz.
10. Receive 522 kHz in the unit.
11. Adjust **Z101 (OSC)** so that the EVM-DC value is within **0.8 ±1.8 V**.
12. Repeat step 3 to 11 and adjust again.

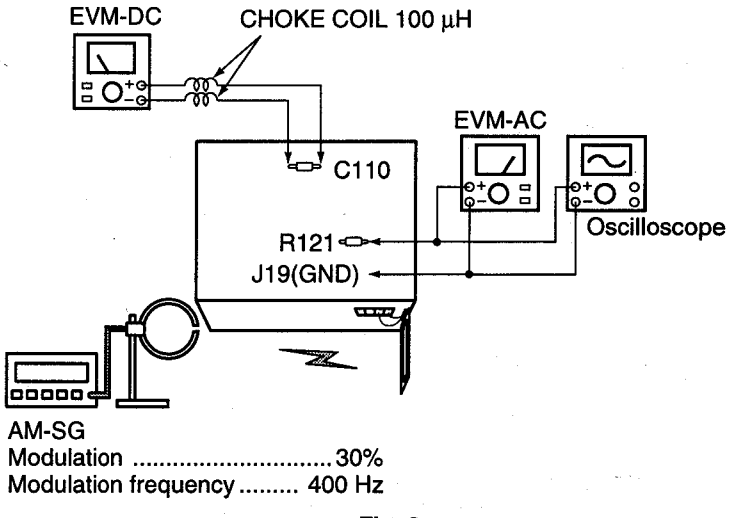


Fig. 3

Adjustment point

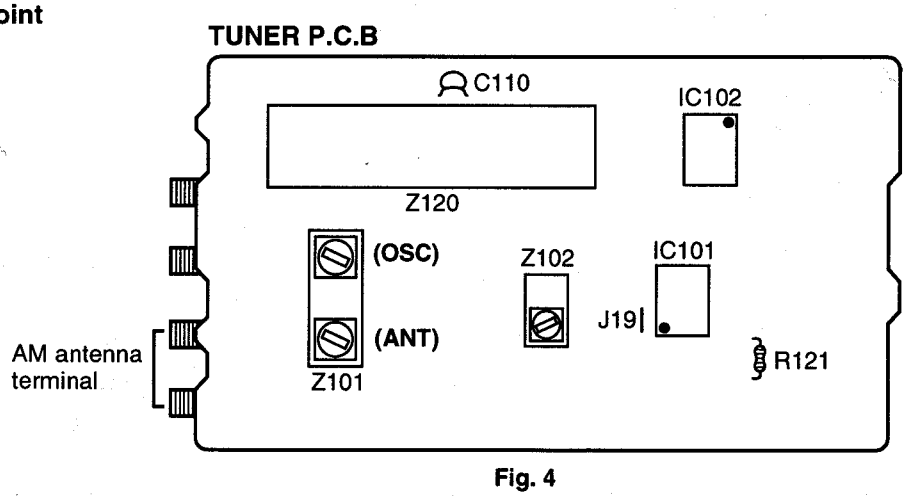


Fig. 4

Tape Deck Section

Measuring Instruments and Special Tools

- Frequency counter
- EVM-AC (AC Electronic voltmeter)
- Test tape
  QZZCFM : Head azimuth adjustment
  QZZCWAT : Tape speed adjustment
- Normal position (Type I) tape (recordable)
- High position (Type II) tape (recordable)

HEAD AZIMUTH ADJUSTMENT (DECK 1/2)

Note:
If you wish to adjust the head azimuth with removing from the units, be sure to adjust with adhering the cassette tape closely to the mechanism by pushing the center of cassette tape with your finger. (Shown in Fig. 5)

1. Connect the measuring instrument as shown in Fig. 6.
2. Replace azimuth screws for both forward and reverse direction after removing the screw-locking bond left on the head base.
   Fine adjustment of azimuth can not be performed with remaining the bond on the head base.
   (Supply part No. of azimuth adjusting screw: **RHD17015**)
3. Playback the azimuth adjustment portion (8 kHz, -20 dB) of test tape (QZZCFM). Adjust the azimuth adjusting screw until the outputs of the L/R-ch are maximized. (Refer to Fig. 7)
   Make sure that the difference in the peak level between the left and right channels does not exceed 0.5 dB.
4. Perform the same adjustment in reverse playback mode.

Checking of the level difference forward and reverse directions

5. Playback the playback gain adjustment portion (315 Hz, 0 dB) of test tape (QZZCFM). Check if level difference between forward and reverse direction is within 1.5 dB.
6. After the adjustment, apply screwlock to the azimuth adjusting screw.

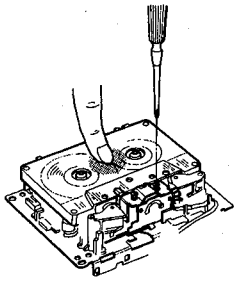


Fig. 5

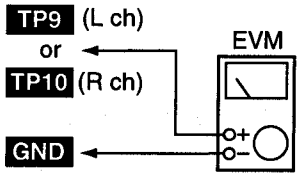


Fig. 6

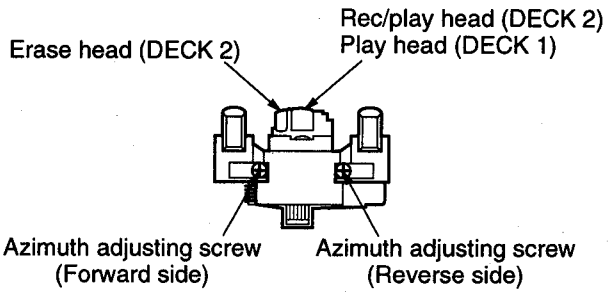


Fig. 7

TAPE SPEED ADJUSTMENT (DECK1/2)

1. Connect the measuring instrument as shown in Fig. 8.
2. Start playback the middle portion of the test tape (QZZCWAT).
3. Adjust VR 201 so that the output frequency is within the value as shown below:

DECK2 FWD playback: 3000 ±60Hz
DECK2 REV playback: ±45Hz to the FWD playback of DECK2
DECK1 FWD playback: ±60Hz to the FWD playback of DECK2
DECK1 REV playback: ±60Hz to the REV playback of DECK2

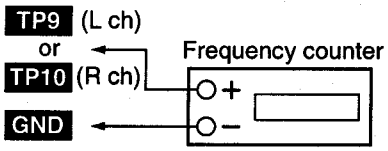


Fig. 8

PLAYBACK GAIN ADJUSTMENT (DECK1/2)

1. Playback the gain adjusted portion (315Hz, 0dB) of the test tape (QZZCFM).
2. Adjust VR101,102 and 103, 104 to the output is within the value as shown below:

DECK1: (L) VR101, (R) VR102
DECK2: (L) VR103, (R) VR104 : **Standard value: 270mV±30mV**

BIAS FREQUENCY ADJUSTMENT (DECK2)

1. Connect the measuring instrument as shown in Fig.10.
2. Insert the normal position (Type I) tape (recordable) into DECK2 and set the unit to "REC" mode.
3. Adjust L201 so that the output frequency is within the standard value.

Standard value: 98 ±8 kHz

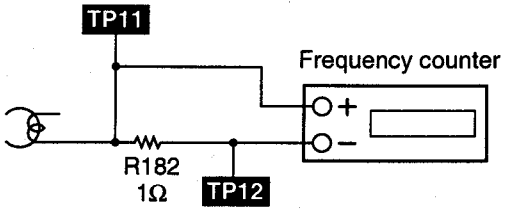


Fig. 10

REC BIAS CHECK (DECK2)

1. Connect the measuring instrument as shown in Fig. 11.
2. Insert the normal position tape or high position tape into DECK2, and set the unit to "REC" mode.
   Then, check the output value is as shown below:

Normal position tape (Type I): 19mV ±4mV
High position tape (Type II): 27mV ±5mV

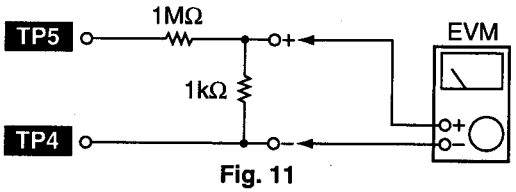


Fig. 11

ERASE VOLTAGE CHECK (DECK2)

1. Connect the measuring instrument as shown in Fig. 12.
2. Insert the normal position tape or high position tape into DECK2, and set the unit to "REC" mode.
   Then, check the output value is as shown below:

Normal position tape (Type I): more than 100mV
High position tape (Type II): more than 150mV

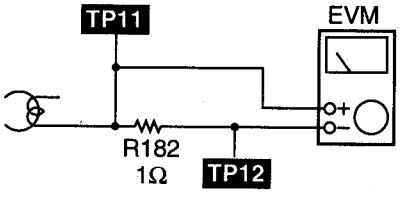


Fig. 12

Adjustment point

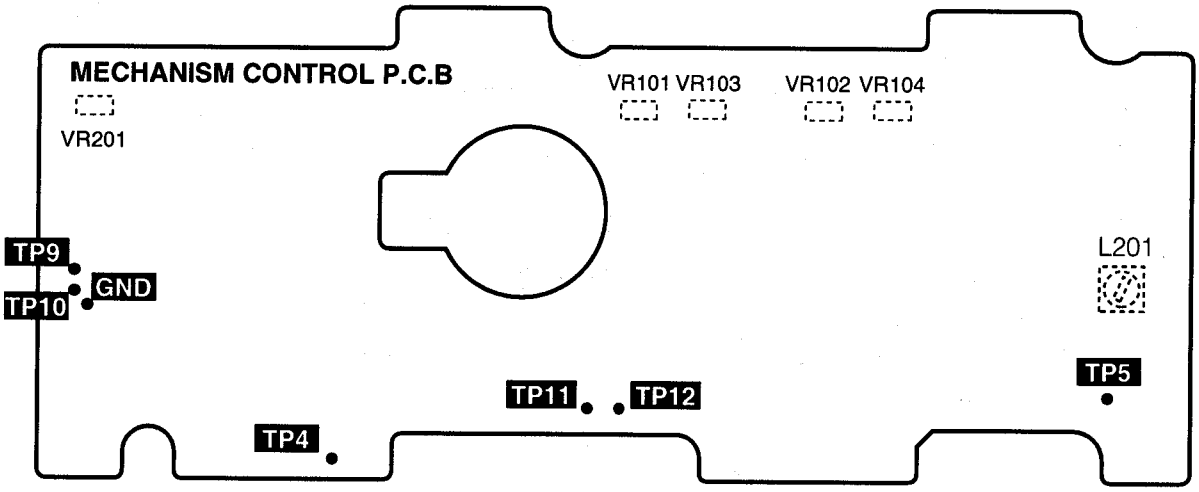
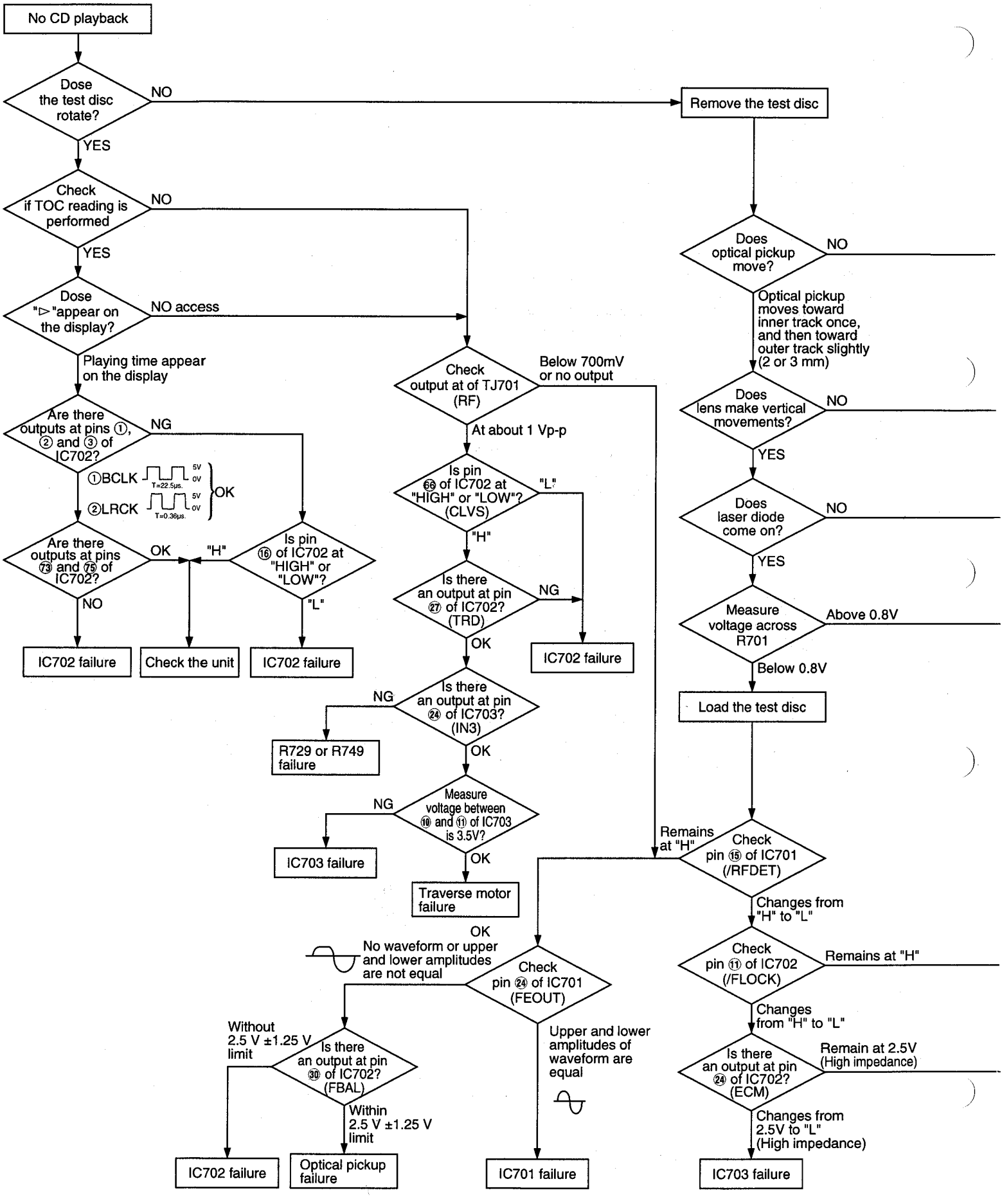
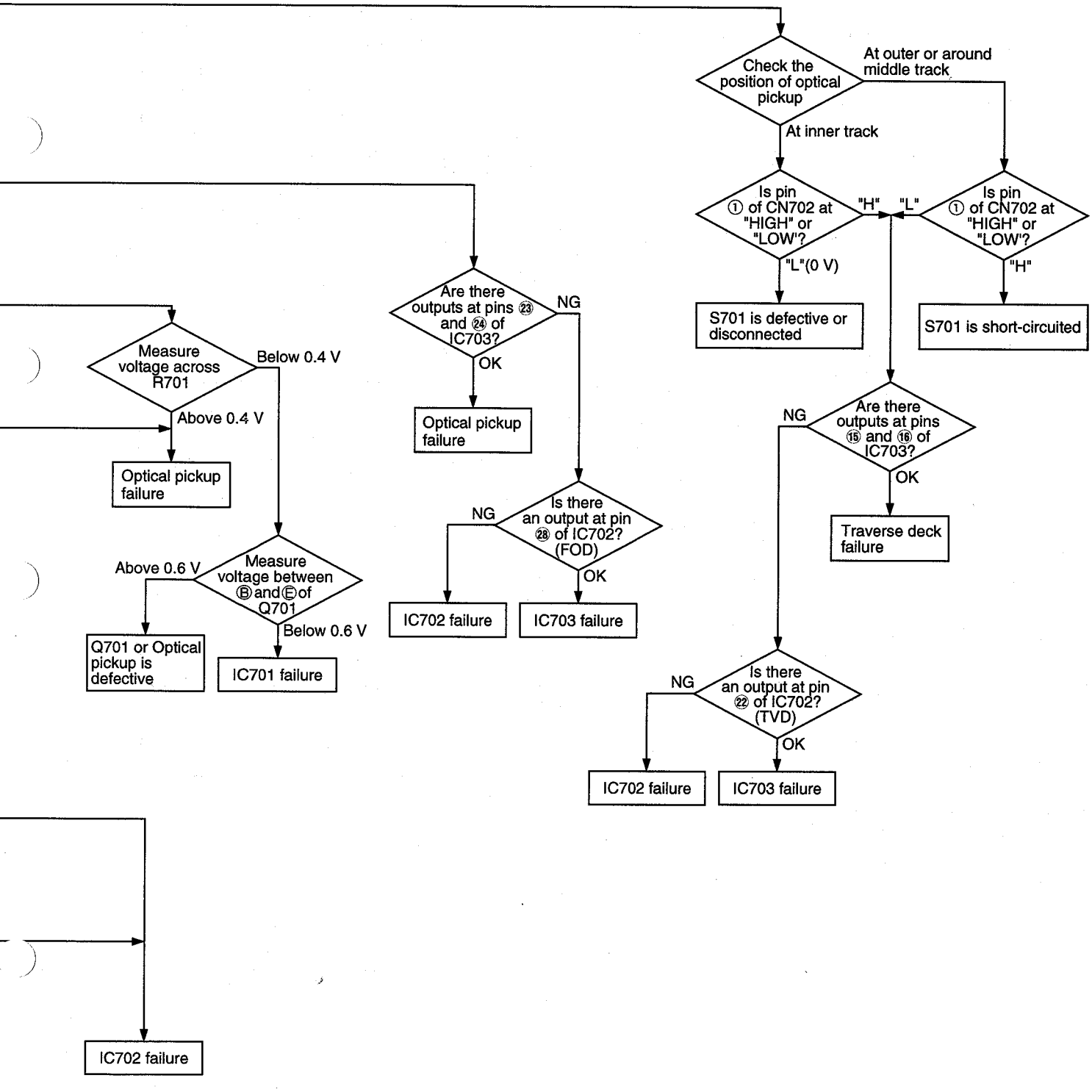


Fig. 13

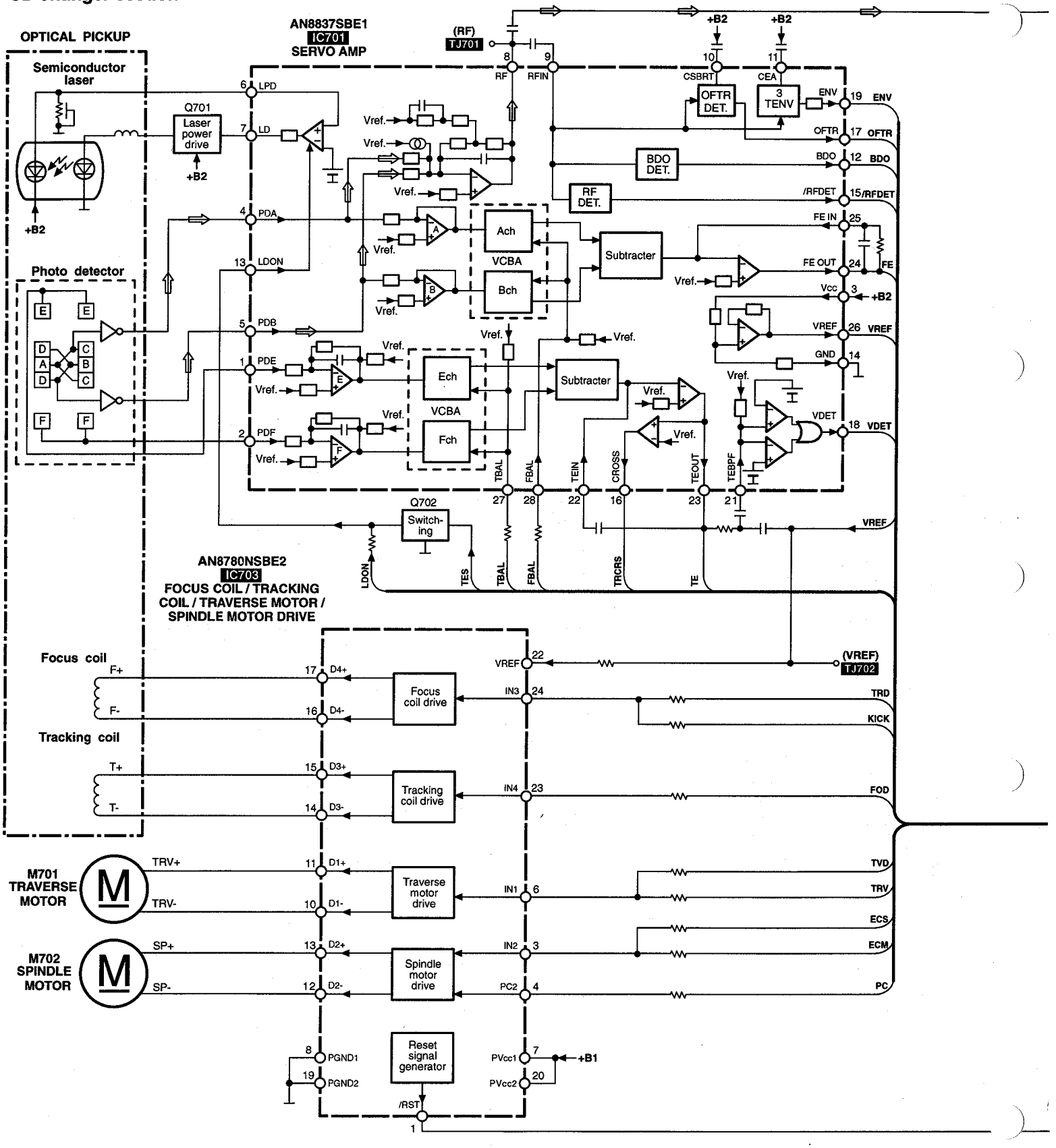
■ Troubleshooting Guide

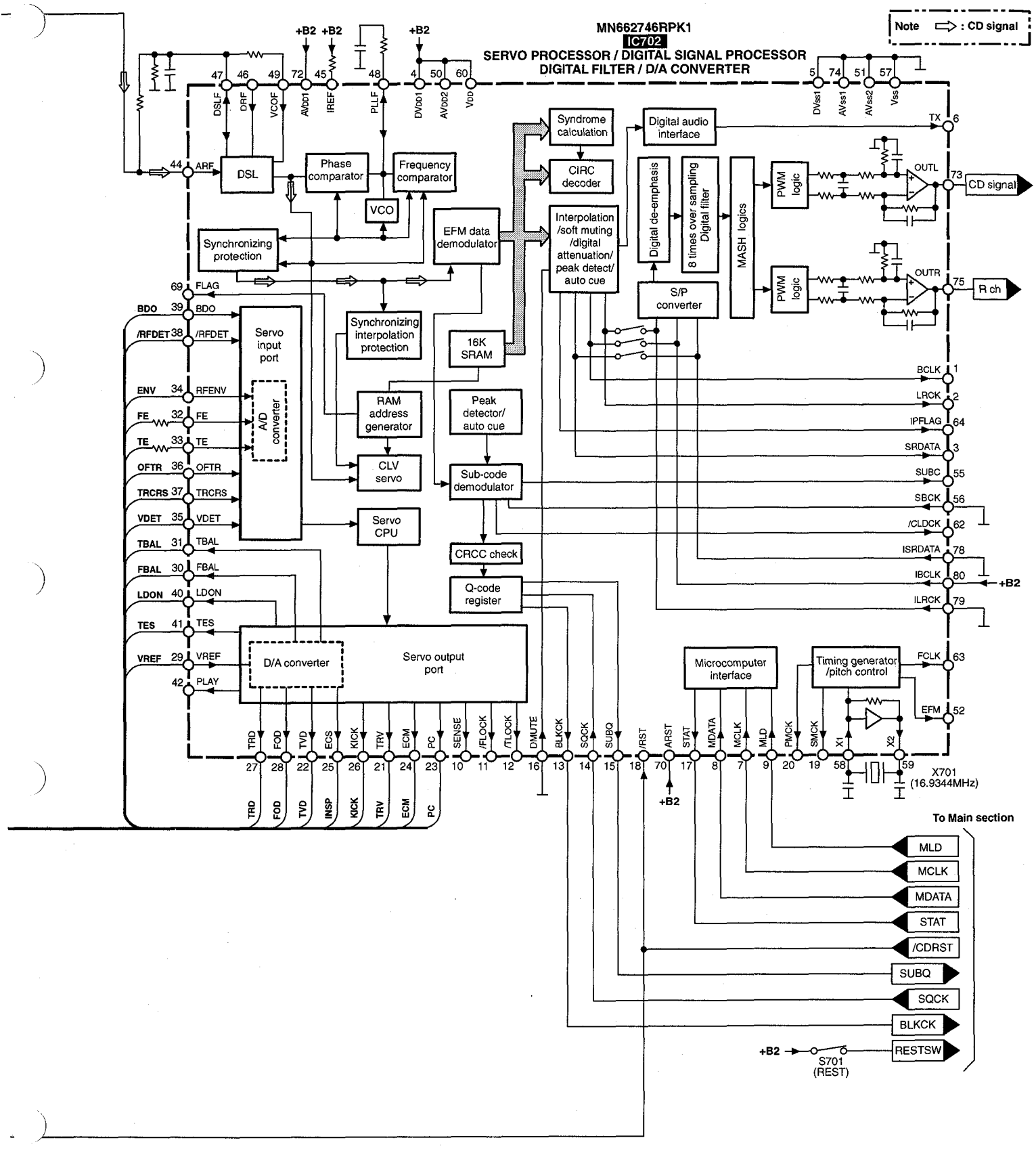



Check the position of optical pickup
At outer or around middle track
At inner track
Is pin ① of CN702 at "HIGH" or "LOW"?
"H"
"L"
Is pin ① of CN702 at "HIGH" or "LOW"?
"L"(0 V)
"H"
S701 is defective or disconnected
S701 is short-circuited
Are there outputs at pins ㉓ and ㉔ of IC703?
NG
OK
Optical pickup failure
Is there an output at pin ㉘ of IC702? (FOD)
NG
OK
IC702 failure
IC703 failure
Measure voltage across R701
Below 0.4 V
Above 0.4 V
Optical pickup failure
Measure voltage between Ⓑ and Ⓔ of Q701
Above 0.6 V
Below 0.6 V
Q701 or Optical pickup is defective
IC701 failure
Are there outputs at pins ⑮ and ⑯ of IC703?
NG
OK
Traverse deck failure
Is there an output at pin ㉒ of IC702? (TVD)
NG
OK
IC702 failure
IC703 failure
IC702 failure

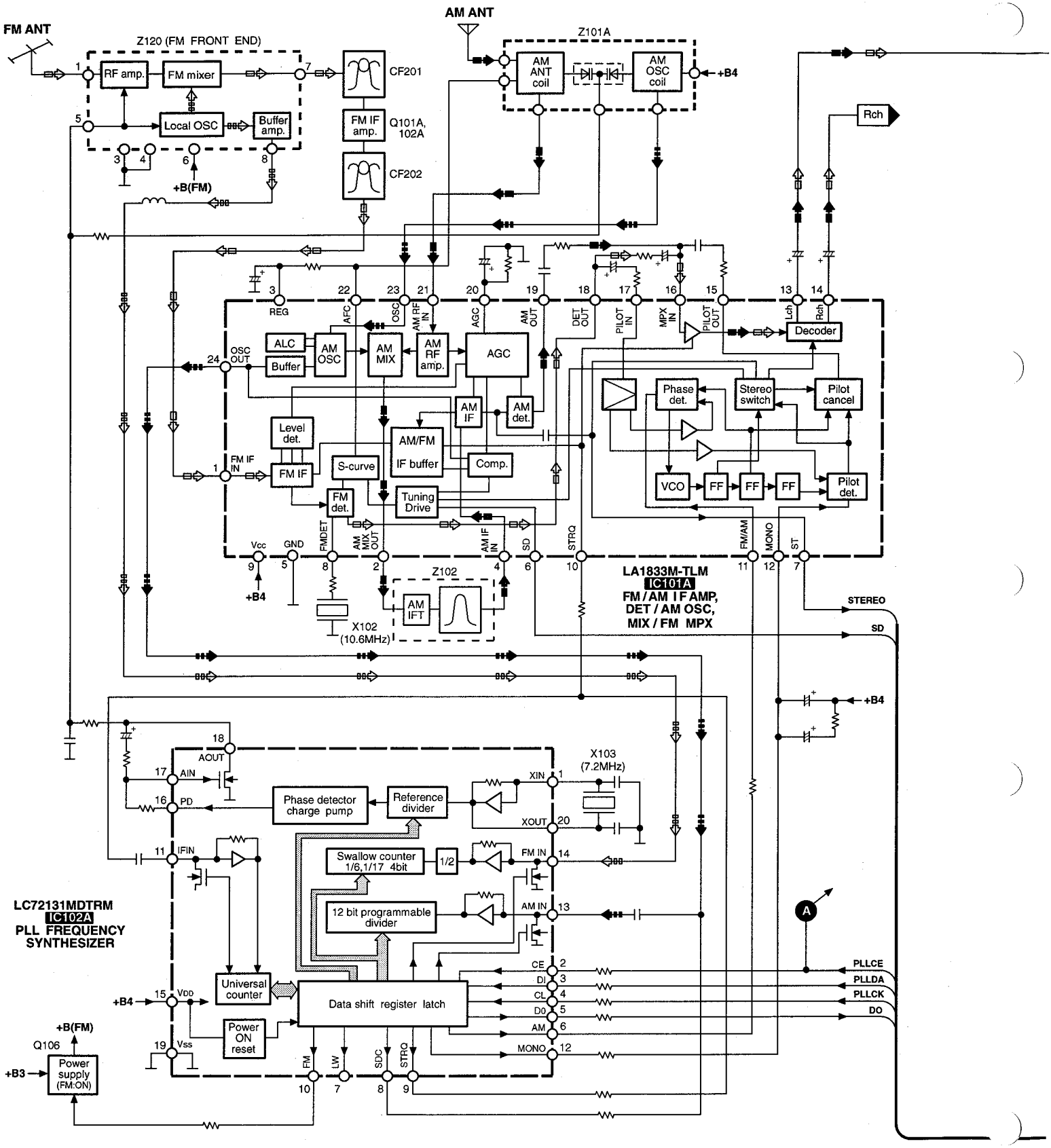
■ Block Diagram

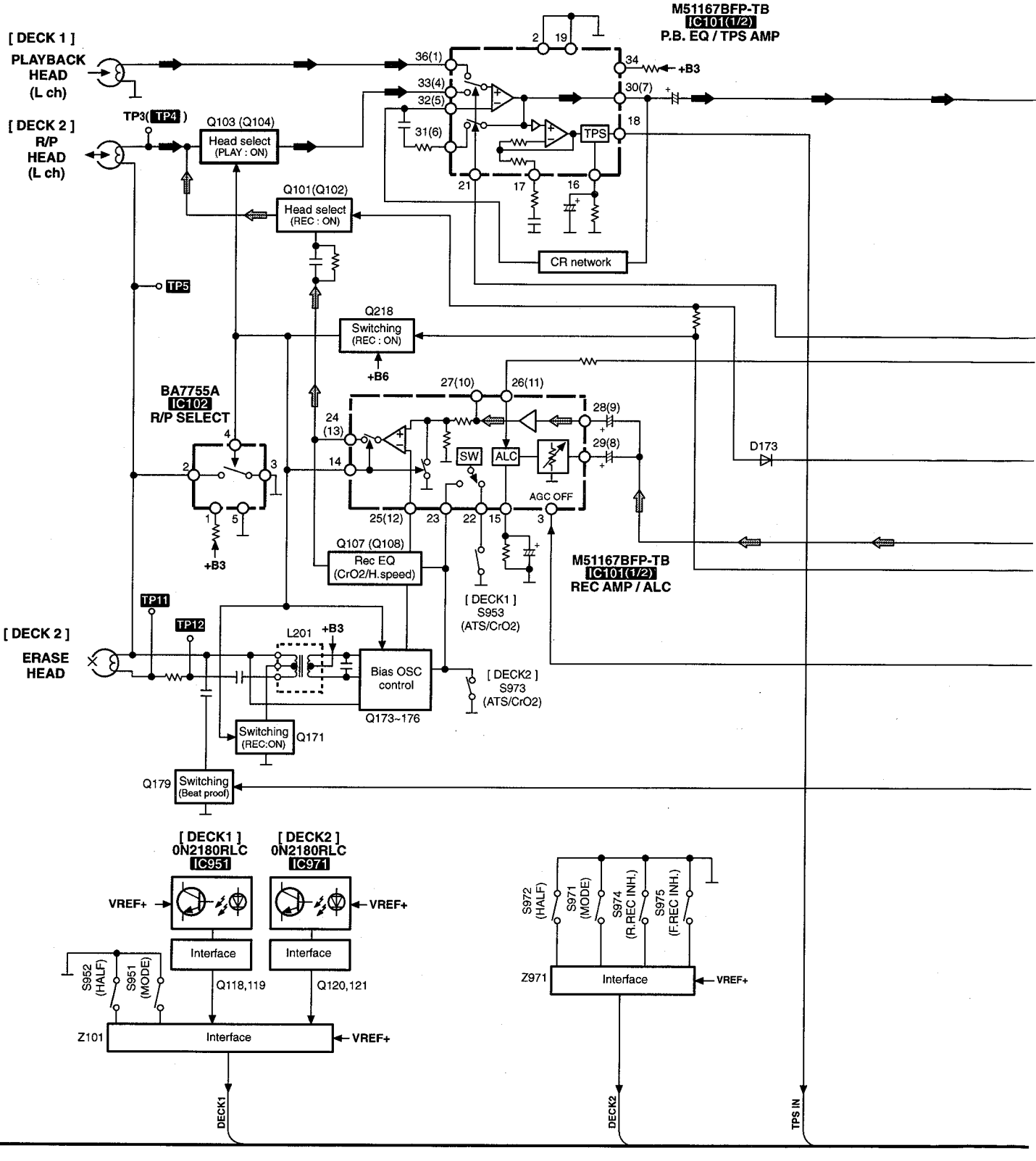
● CD changer section

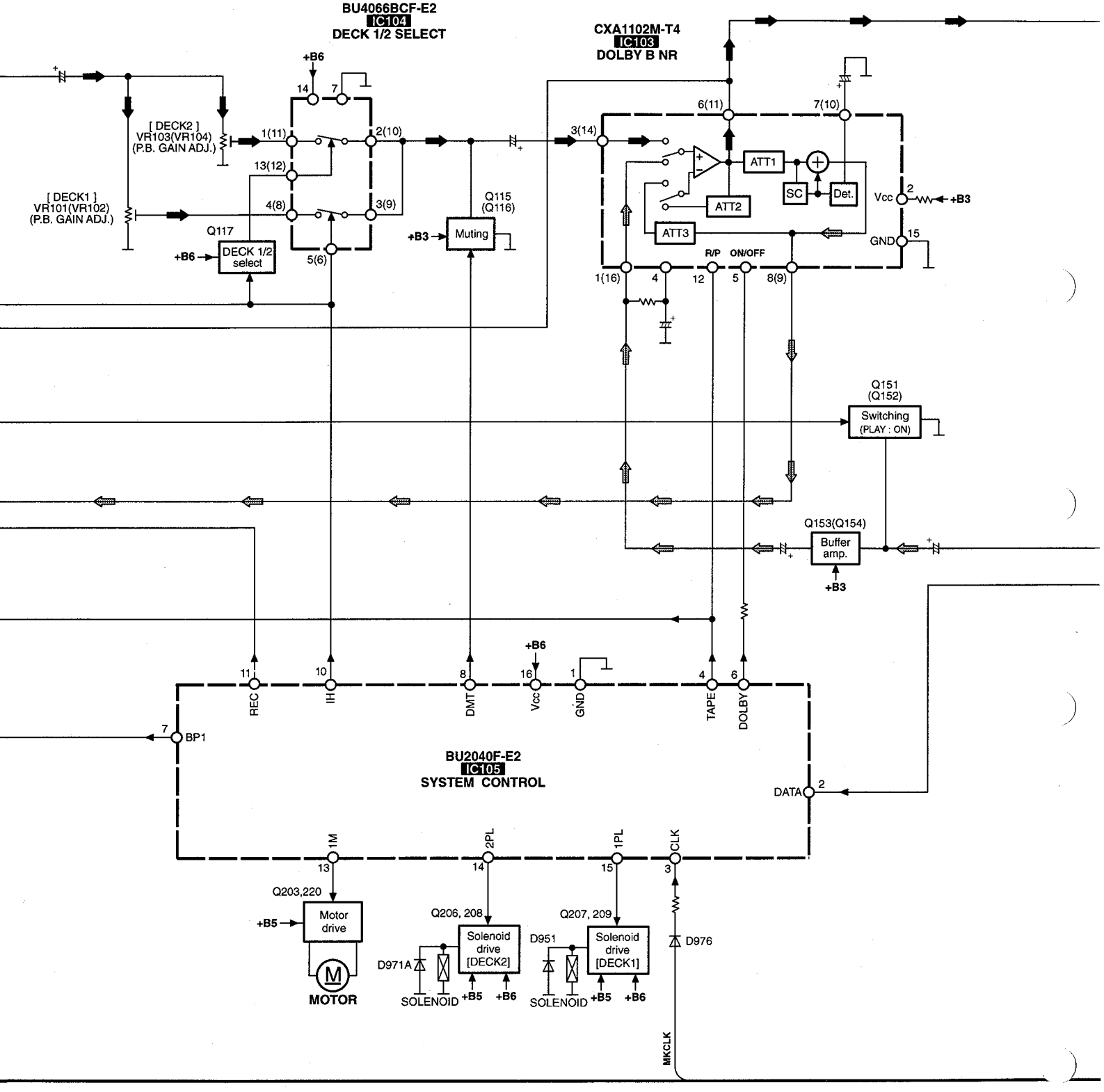


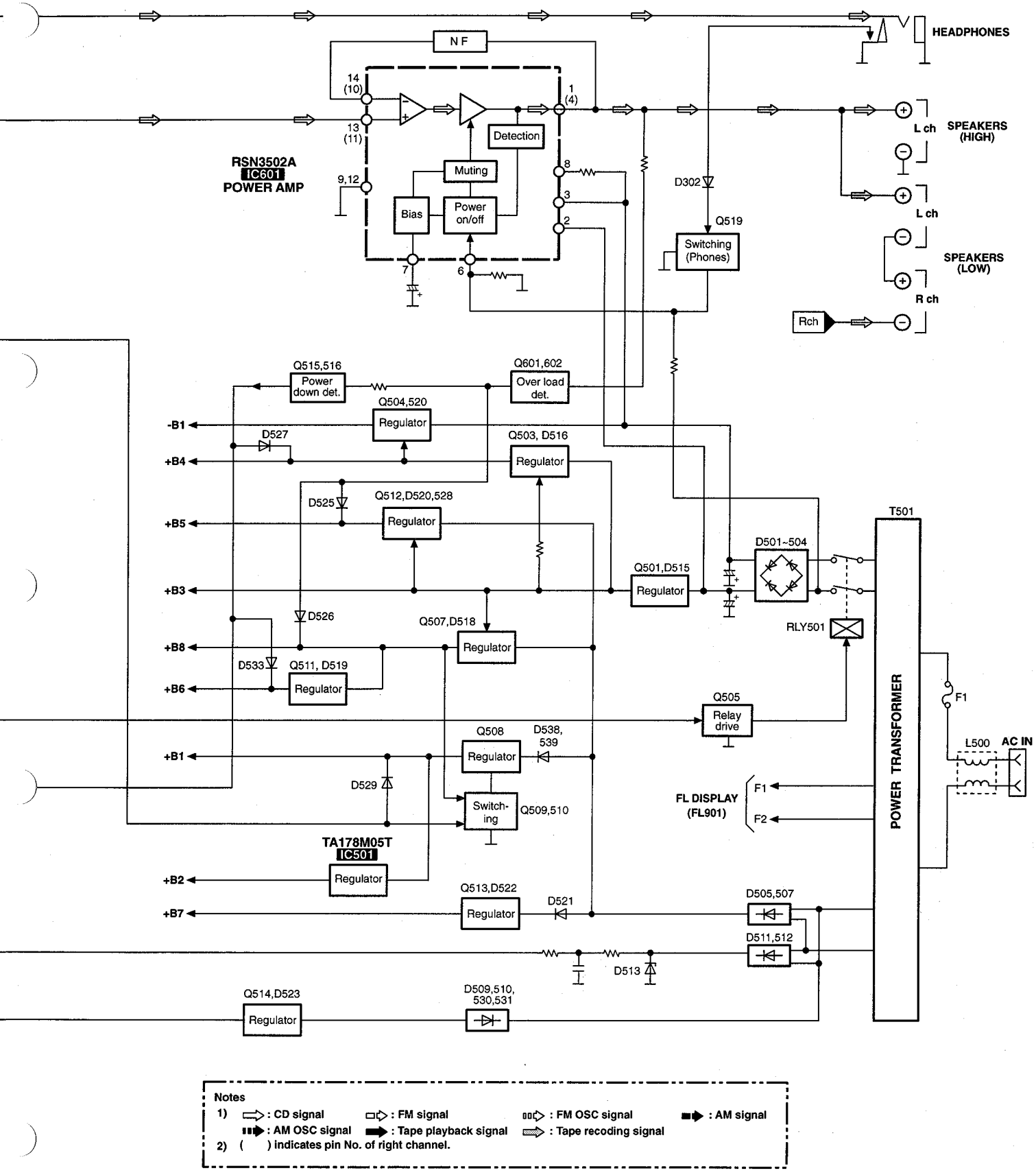

MN662746RPK1
IC702
SERVO PROCESSOR / DIGITAL SIGNAL PROCESSOR
DIGITAL FILTER / D/A CONVERTER
Note : CD signal
+B2 +B2
+B2
DSLF DRF VCOF AVdd1 IREF PLLF DVdd1 AVdd2 Vdd
DVss1 AVss1 AVss2 Vss
ARF
DSL
Phase comparator
Frequency comparator
VCO
Synchronizing protection
EFM data demodulator
Syndrome calculation
CIRC decoder
Interpolation /soft muting /digital attenuation/ peak detect/ auto cue
Digital audio interface
Digital de-emphasis
8 times over sampling Digital filter
MASH logics
S/P converter
PWM logic
PWM logic
OUTL
OUTR
CD signal
R ch
TX
FLAG
BDO
/RFDET
Servo input port
A/D converter
ENV RFENV
FE
TE
OFTR
TRCRS
VDET
TBAL
FBAL
LDON
TES
VREF
PLAY
Synchronizing interpolation protection
16K SRAM
RAM address generator
Peak detector/ auto cue
CLV servo
Sub-code demodulator
Servo CPU
CRCC check
Q-code register
D/A converter
Servo output port
Microcomputer interface
Timing generator /pitch control
BCLK
LRCK
IPFLAG
SRDATA
SUBC
SBCK
/CLDCK
ISRDATA
IBCLK
ILRCK
FCLK
EFM
X701
(16.9344MHz)
TRD FOD TVD ECS KICK TRV ECM PC SENSE /FLOCK /TLOCK DMUTE BLKCK SQCK SUBQ /RST ARST STAT MDATA MCLK MLD PMCK SMCK X1 X2
TRD FOD TVD INSP KICK TRV ECM PC
To Main section
MLD
MCLK
MDATA
STAT
/CDRST
SUBQ
SQCK
BLKCK
RESTSW
+B2
S701
(REST)

● Main section




M51167BFP-TB
IC101(1/2)
P.B. EQ / TPS AMP
[DECK 1]
PLAYBACK HEAD (L ch)
[DECK 2]
R/P HEAD (L ch)
TP3(TP4)
Q103 (Q104)
Head select (PLAY : ON)
Q101(Q102)
Head select (REC : ON)
TP5
CR network
TPS
Q218
Switching (REC : ON)
+B6
BA7755A
IC102
R/P SELECT
+B3
SW
ALC
AGC OFF
D173
Q107 (Q108)
Rec EQ (CrO2/H.speed)
M51167BFP-TB
IC101(1/2)
REC AMP / ALC
[DECK1]
S953
(ATS/CrO2)
[DECK 2]
ERASE HEAD
TP11
TP12
L201
Bias OSC control
Q173~176
[DECK2]
S973
(ATS/CrO2)
Switching (REC:ON)
Q171
Q179
Switching (Beat proof)
[DECK1]
0N2180RLC
IC951
[DECK2]
0N2180RLC
IC971
VREF+
Interface
S952 (HALF)
S951 (MODE)
Q118,119
Q120,121
Z101
S972 (HALF)
S971 (MODE)
S974 (R.REC INH.)
S975 (F.REC INH.)
Z971
DECK1
DECK2
TPS IN


BU4066BCF-E2
IC104
DECK 1/2 SELECT
CXA1102M-T4
IC103
DOLBY B NR
+B6
[DECK2]
VR103(VR104)
(P.B. GAIN ADJ.)
[DECK1]
VR101(VR102)
(P.B. GAIN ADJ.)
Q117
DECK 1/2 select
Q115
(Q116)
Muting
+B3
ATT1
ATT2
ATT3
SC
Det.
Vcc
GND
R/P
ON/OFF
Q151
(Q152)
Switching
(PLAY : ON)
Q153(Q154)
Buffer amp.
REC
IH
DMT
Vcc
GND
TAPE
DOLBY
BP1
BU2040F-E2
IC105
SYSTEM CONTROL
DATA
1M
2PL
1PL
CLK
Q203,220
Motor drive
MOTOR
Q206, 208
Solenoid drive [DECK2]
SOLENOID
Q207, 209
Solenoid drive [DECK1]
SOLENOID
D971A
D951
D976
MKCLK



Notes

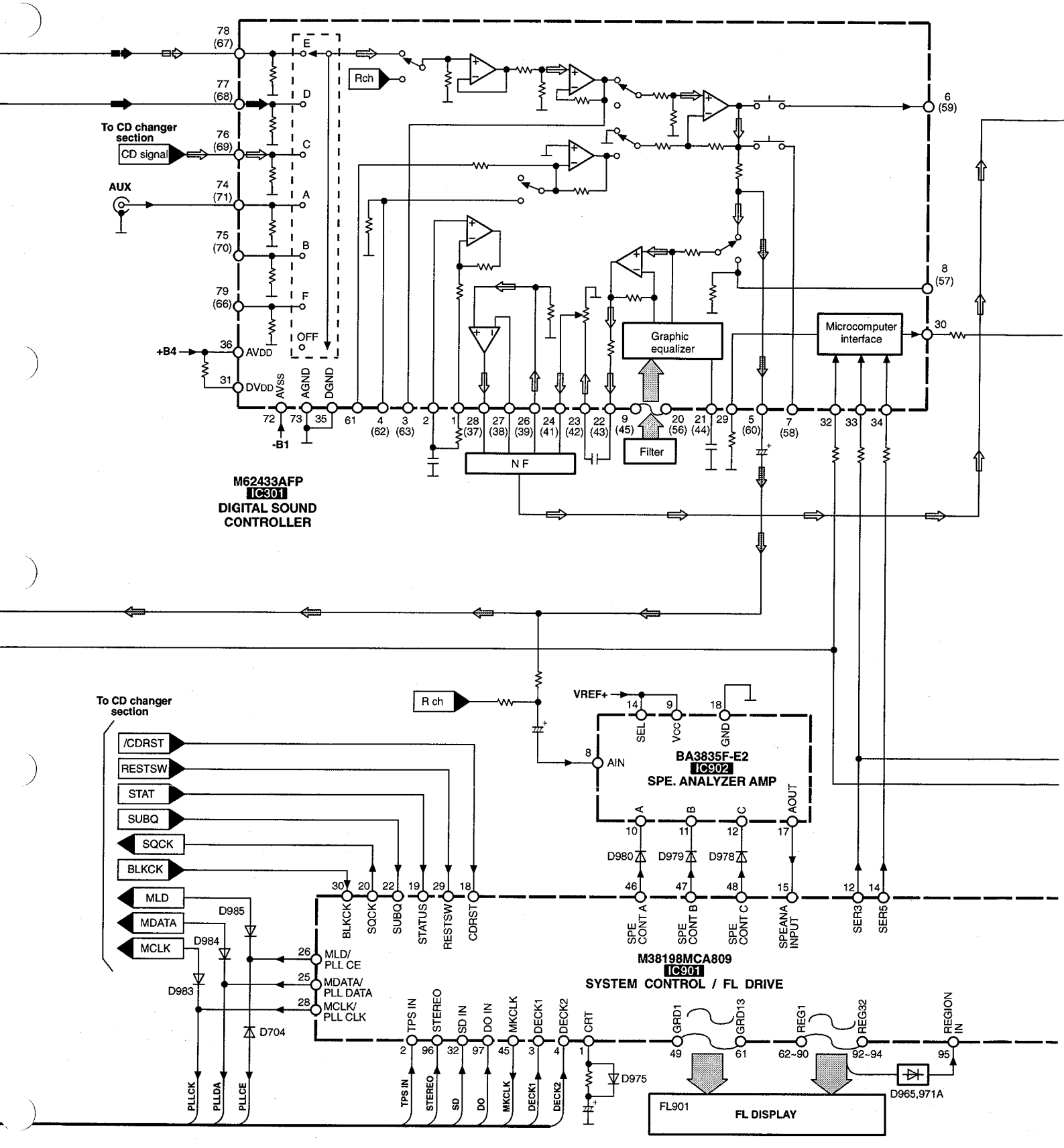
1) ⇨: CD signal ⇨: FM signal ⇨: FM OSC signal ➡: AM signal
⇨: AM OSC signal ➡: Tape playback signal ⇨: Tape recoding signal

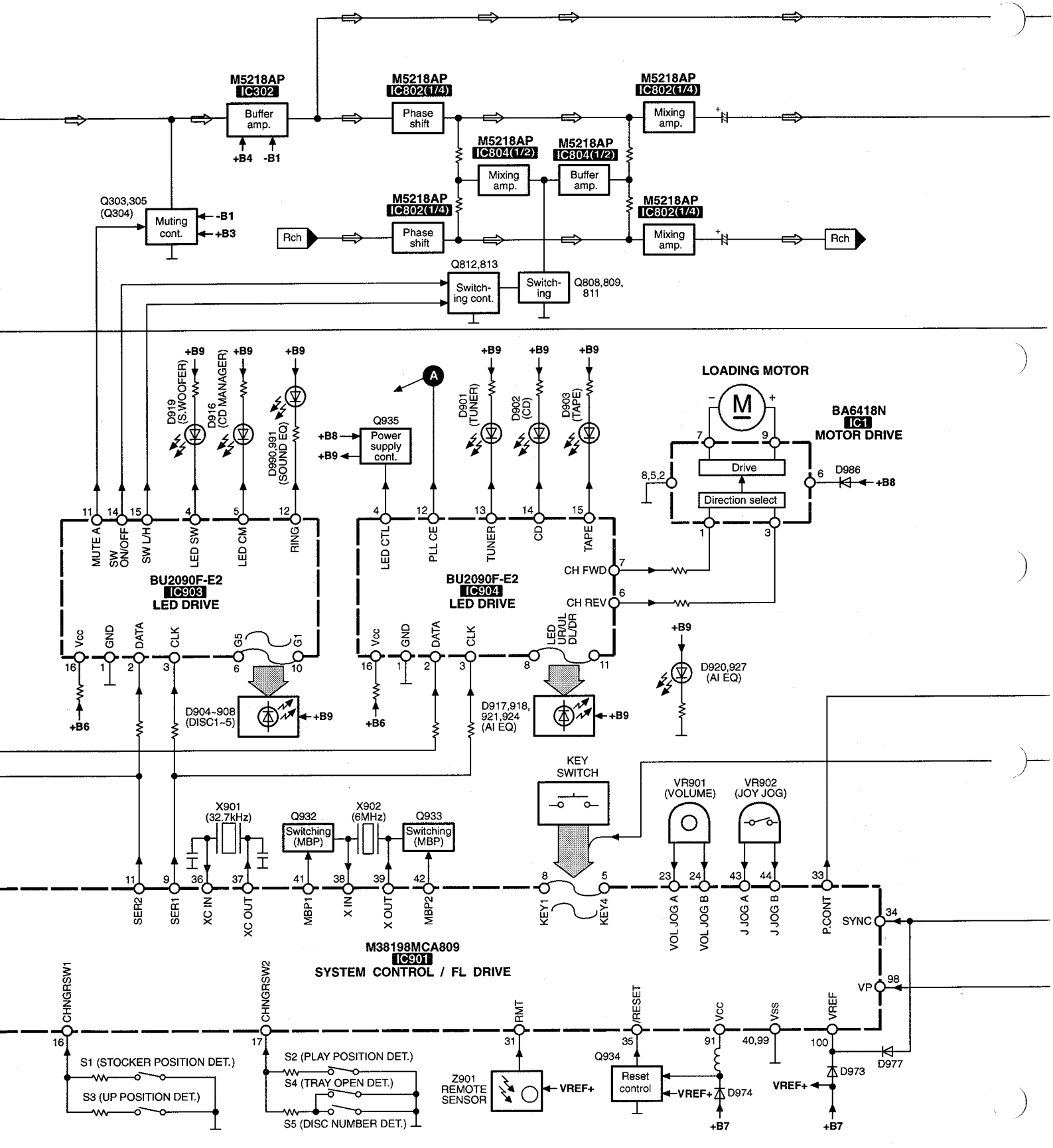
2) ( ) indicates pin No. of right channel.

■ Replacement Parts List

Notes:
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
  When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.
- The parenthesized indications in the Remarks coulumns specify the areas. (Refer to the cover page for area.)
- ALL parts are supplied by MESA.
- The "<IA> <IB> <IC> <ID> <IE> <IF> <IG>" marks in Remarks indicate language of instruction manual.
  <IA> : English
  <IB> : Russian
  <IC> : English
  <ID> : German, Italian, French
  <IE> : Dutch, Danish
  <IF> : English, Spanish, Swedish
  <IG> : Czeco, Polish

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RDG0129-1	DAMPER GEAR	2	
2	RFKNACH34PK	HOLDER ARM ASS'Y	1	
3	REE0832-1	FFC(23P)	1	
4	REE0833	FFC(20P)	1	
5	REE0834	FFC(23P)	1	
6	REEX0025	FFC(14P)	1	
7	RFKGAAK25EBK	FRONT CABINET ASS'Y	1	
7-1	RGK0959A-K	TOP CABINET ASS'Y	1	
7-2	RKA0059-K	LEG RUBBER	2	
7-3	RKW0527-V	FL WINDOW	1	
7-4	RGL0383-Q	CD LIGHTING CHIP	1	
8	RGK0963-Q	AI EQ CAP	1	
9	RGK0979-S	CHANGER LID	1	
10	RGL0382-Q	JOG RING LIGHTING CHIP	1	
11	RGRX0008P-A1	REAR PANEL	1	(EG), (E)
11	RGRX0008P-B1	REAR PANEL	1	(EB)
11	RGRX0008L-A1	REAR PANEL	1	(EE)MBV
12	RYQ0234A-S	CONTROL BUTTON ASS'Y	1	
13	RGU1588A-S1	DECK BUTTON	1	
14	RGU1589-Q	FUNCTION BUTTON	1	
17	RGU1592-Q	DISC SELECT BUTTON	1	
19	RGU1594-Q	SUPER WOOFER BUTTON	1	
20	RGW0274-S	JOY STICK KNOB	1	
21	RGW0275-S	JOG KNOB	1	
23	RGWX0027-1S	VOLUME KNOB	1	
24	RFKLACH330AK	CASS. HOLDER ASS'Y(L)	1	
24-1	RUS757ZAA	CASS. HALF SPRING	2	
25	RFKLACH330BK	CASS. HOLDER ASS'Y(R)	1	
25-1	RUS757ZAA	CASS. HALF SPRING	2	
26	RFKLAAK25GBK	CASS. LID ASS'Y(L)	1	
26-1	RKW0528-Q	CASSETTE WINDOW(L)	1	
27	RFKLAAK25EBK	CASS. LID ASS'Y(R)	1	
27-1	RKW0529A-Q	CASSETTE WINDOW(R)	1	
28	RMB0446	CASSETTE OPEN SPRING	2	
29	RMB0564-1	CD OPEN SPRING	1	
30	RMC0158-S	TR FIXTURE	2	
31	RFKJAAK25GCK	BOTTOM CHASSIS ASS'Y	1	
31-1	RKA0059-K	LEG RUBBER	2	
32	RMN0244	ANT HOLDER	1	
33	RMN0350	8 LED HOLDER	1	
34	RMN0454	FL HOLDER	1	
35	RMN0456	LED HOLDER(CD)	1	
36	RMN0457	LED HOLDER(AMP)	1	
37	RMN0458	LED HOLDER2(AMP)	1	
38	RMN0482	LED HOLDER(POSITION	2	
39	RMN0490	MECHA ANGLE	1	
40	RMNX0017-X	MAIN PCB HOLDER	1	
41	RMR0319	CABLE HOLDER(10P)	1	
42	RKM0371A-K	TOP CABINET	1	
44	RMR1133-X	CD SUPPORT	1	
45	RMR1159-X	MECHA HOLDER'L'	1	
46	RMR1160-X	MECHA HOLDER'R'	1	
47	RMRX0026-W	WIRE CLAMPER	1	
48	RMV0150	HEAT PROTECT SHEET	1	
49	RXX0193	HEAT SINK	1	
50	XTB3+10J	SCREW	2	
51	XTB3+10JFZ	SCREW	11	
52	XTB3+12J	SCREW	3	
53	XTB3+20J1	SCREW	2	
54	XTBS26+10J	SCREW	4	
56	XTBS3+8JFZ1	SCREW	22	
57	XTW3+15T	SCREW	2	
58	RHD30048	SCREW	2	
59	RHD30076-K	SCREW	6	
60	RSC0027-1	SHIELD CASE	1	
61	RME0221	HOLDER ARM SPRING	1	
62	RMGX0020-K	RUBBER SPACER	1	
63	SHE187-4	SPACER(TRANS)	1	
64	REXX0190	WIRE(7P)	1	
65	XTBS26+12J	SCREW	19	
101	RED0037	R/P HEAD BLOCK ASS'Y	1	
101-1	RHD17015	SCREW	2	
102	RED0038	P/B HEAD BLOCK ASS'Y	1	
102-1	RHD17015	SCREW	2	
103	RDG0300	REEL TABLE BASE	4	
104	RDG0301	GEAR	2	
105	RDK0026	GEAR	2	
106	RDR0029	RELAY PULLY	1	
107	RDV0033-1	BELT	2	
108	RDV0034	BELT	1	
109	RDV0057-J	BELT	1	
110	RUW147ZA	SPRING	2	
111	RMB0400	REEL TABLE SPRING	4	
112	RMB0403	SPRING	2	
113	RMB0404	SPRING	2	
114	RMB0406	SPRING	2	
115	RMB0408	SPRING	2	
116	RML0370	LEVER	2	
117	RML0371	LEVER	2	
118	RML0372	ARM	2	
119	RML0374	LEVER	2	
120	RMM0131	LEVER	2	
121	RMM0133	LEVER	2	
122	RMQ0519	REEL TABLE HEAD	4	
123	RXQ0470	PLUNGER	2	
123-1	RMS0398-1	SHAFT	2	
125	RUS609ZC	SPRING	2	
126	RXF0049	FLYWHEEL ASS'Y	2	
127	RXF0050	FLYWHEEL ASS'Y	2	
128	RXG0040	GEAR	2	
129	RMK0283	PLATE	2	
130	RXL0124	PINCH ROLLER ASS'Y	2	
130-1	RMB0401	SPRING	2	
131	RXL0125	PINCH ROLLER ASS'Y	1	
131-1	RMB0402	SPRING	1	
132	RXL0126	GEAR	1	
133	RXQ0412	ROD	1	
133-1	RMB0405	SPRING	1	
133-2	RMM0132	ROD	1	
134	REM0055-1	MOTOR ASS'Y	1	
135	RHD26022	SCREW	2	
136	XTW2+5L	SCREW	4	
137	XTW26+10S	SCREW	6	
138	XYC2+JF17	SCREW	2	
140	RFKJXED70-K	CHASSIS ASS'Y	1	
301	RDG0309	RELAY GEAR	1	
302	RDG0310	PULLEY GEAR	1	
303	RDG0311	DRIVE GEAR	1	
304	RDG0313	UP/DOWN GEAR LEVER	1	
305	RDV0036	BELT	1	
306	RFKPDS790PK1	MOTOR ASS'Y	1	
307	RGQ0170-K	TRAY1	1	
308	RGQ0171-K	TRAY2	1	
309	RGQ0172-K	TRAY3	1	


To CD changer section
CD signal
AUX
+B4
-B1
Rch
Graphic equalizer
Microcomputer interface
Filter
N F
M62433AFP
IC301
DIGITAL SOUND CONTROLLER
R ch
VREF+
BA3835F-E2
IC902
SPE. ANALYZER AMP
/CDRST
RESTSW
STAT
SUBQ
SQCK
BLKCK
MLD
MDATA
MCLK
D985
D984
D983
D704
MLD/ PLL CE
MDATA/ PLL DATA
MCLK/ PLL CLK
PLLCK
PLLDA
PLLCE
M38198MCA809
IC901
SYSTEM CONTROL / FL DRIVE
D980
D979
D978
D975
D965,971A
FL901
FL DISPLAY


M5218AP
IC302
Buffer amp.
+B4 -B1
M5218AP
IC802(1/4)
Phase shift
M5218AP
IC802(1/4)
Mixing amp.
M5218AP
IC804(1/2)
Mixing amp.
M5218AP
IC804(1/2)
Buffer amp.
M5218AP
IC802(1/4)
Phase shift
M5218AP
IC802(1/4)
Mixing amp.
Q303,305
(Q304)
Muting cont.
-B1
+B3
Rch
Rch
Q812,813
Switch-ing cont.
Switch-ing
Q808,809, 811
+B9
D919 (S.WOOFER)
D916 (CD MANAGER)
D990,991 (SOUND EQ)
Q935
Power supply cont.
+B8
+B9
D901 (TUNER)
D902 (CD)
D903 (TAPE)
LOADING MOTOR
BA6418N
IC1
MOTOR DRIVE
Drive
Direction select
D986
+B8
8,5,2
MUTE A
SW ON/OFF
SW L/H
LED SW
LED CM
RING
LED CTL
PLL CE
TUNER
CD
TAPE
CH FWD
CH REV
BU2090F-E2
IC903
LED DRIVE
BU2090F-E2
IC904
LED DRIVE
Vcc
GND
DATA
CLK
G5
G1
LED UR/UL DL/DR
+B6
D904~908 (DISC1~5)
D917,918, 921,924 (AI EQ)
D920,927 (AI EQ)
KEY SWITCH
VR901 (VOLUME)
VR902 (JOY JOG)
X901 (32.7kHz)
Q932 Switching (MBP)
X902 (6MHz)
Q933 Switching (MBP)
SER2
SER1
XC IN
XC OUT
MBP1
X IN
X OUT
MBP2
KEY1
KEY4
VOL JOG A
VOL JOG B
J JOG A
J JOG B
P.CONT
SYNC
M38198MCA809
IC901
SYSTEM CONTROL / FL DRIVE
CHNGRSW1
CHNGRSW2
RMT
/RESET
Vcc
Vss
VREF
VP
S1 (STOCKER POSITION DET.)
S3 (UP POSITION DET.)
S2 (PLAY POSITION DET.)
S4 (TRAY OPEN DET.)
S5 (DISC NUMBER DET.)
Z901 REMOTE SENSOR
VREF+
Q934
Reset control
D974
D973
D977
+B7

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
310	RGQ0173-K	TRAY4	1	
311	RGQ0174-K	TRAY5	1	
312	RME0170	LOCK LEVER SPRING	1	
313	RME0179	ASSIST SPRING	1	
314	RME018D	TRAY HOLDER SPRING	1	
315	RFKNACH430GC	MECHA BASE ASS'Y	1	
315	RMF0221	FELT	1	
315	RMG0402-K	RUBBER WASHER	4	
316	RML0379	CHANGE LEVER	1	
317	RML038D	LOCK LEVER	1	
318	RML0383	TRAY HOLDING LEVER	1	
319	RML0385	UP/DOWN LEVER	1	
320	RMM0139	SLIDE PLATE LEVER(1)	1	
321	RMM0141	SLIDE PLATE LEVER(2)	1	
322	RGQ0175-K	TRAY ORNAMENT	1	
323	RHD20010	SCREW DRIVE RACK	1	
324	RMA0868	SUPPORT ANGLE	1	
325	RME0171	BASE LOCK LEVER SP	1	
326	RME0172	CARRIER LOCK LEVERS	1	
327	RML0377	BASE LOCK LEVER	1	
328	RML0378	CARRIER LOCK LEVER	1	
329	RMR0884-K	TRAY BASE	1	
330	RHD20009-1	SCREW CARRIER	1	
331	RMC0274	TRAY FOOK SPRING	1	
332	RME0173	CARRIER ARM SPRING	1	
333	RML0376-1	CARRIER ARM	1	
334	RMM0137	CARRIER LEVER	1	
335	RDG0312	SPEED UP GEAR	2	
336	RMM0134	DRIVE GEAR	1	
337	RMM0135	CUSHION RACK	1	
338	XTN2+6F	SCREW SUPPORT ANGLE	1	
339	XTS3+8J	SCREW	2	
340	XWE4E10	CUSHION	2	
341	RME0178	HOLDING SPRING	2	
342	RME0181	UP PREVENTION SP(R)	1	
343	RME0182	UPPREVENTIONSP(L)	1	
344	RFKNACH430GD	MECHA COVER ASS'Y	1	
344-1	RMF0221	FELT	8	
345	RML0381	HOLDING CATCH(1)	1	
346	RML0382	HOLDING CATCH(2)	1	
347	RML0384	UP PREVENTION LEVER	2	
348	RHM245ZA	MAGNET	1	
349	RME0174	CLAMP BASE SPRING	1	
350	RFKNACH430GE	CLAMP BASE ASS'Y	1	
351	RML0388-1	CLAMP LEVER	1	
352	RAE0152Z	TRAVERSE UNIT	1	
352-1	SHGD113-1	FLOATING RUBBER	1	
352-2	SNSD38	SCREW	1	
353	RMR0899-K	FIXED PLATE	1	
354	XTB3+10JFZ	SCREW PB, LID	11	
355	RMR0975-W	TRY CAP	1	
356	RME0109	FLOATING SPRING(1)	1	
357	RME0142	FLOATING SPRING(2)	1	
358	RMK0293	TRAVERSE CHASSIS	1	
359	RMS0627	PIN	1	
360	XTN2+6G	SCREW	1	
362	REZ0792	3P WIRE KIT	1	
363	REZ0793	3P WIRE KIT	1	
364	RMG0430-Q	RUBBER TUBE	4	
365	XTWS3+8T	SCREW	2	
366	RMS0350-1	PIN	1	
367	REEX0025	FFC(14P)	1	
368	REE0832	FFC(23P)	1	
369	RMR0624-W2	CLAMPER	1	
A1	EUR644853	REMOTE CONTROL	1	
A1-1	UR64EC1987B	R/C BATTERY COVER	1	
A2	RQT4175-B	O/I BOOK	1	(EE)MBV<IA>
A2	RQT4180-R	O/I BOOK	1	(EE)MBV<IB>
A2	RQT4415-B	O/I BOOK	1	(EB)<IC>
A2	RQT4416-D	O/I BOOK	1	(EG)<ID>
A2	RQT4417-H	O/I BOOK	1	(EG)<IE>
A2	RQT4418-E	O/I BOOK	1	(E)<IF>
A2	RQT4419-R	O/I BOOK	1	(E)<IG>
⚠ A3	RJA0019-X	AC CORD	1	(EE)

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
⚠ A3	RJA0043-1C	AC CORD	1	(EG), (E)
⚠ A3	RJA0044-1C	AC CORD	1	(EB)
A4	RSA0022	AM LOOP ANT	1	
A5	RSA0007	FM ANTENA	1	
C1	ECA1AKF820	10V 82	1	
C101	ECBT1H102KB5	50V 1000P	1	
C101A	ECBT1C103NS5	16V 0.01	1	
C102	ECBT1H102KB5	50V 1000P	1	
C102A	ECEA1CKS101	16V 100	1	
C103	ECBA1H681KB5	50V 680P	1	
C103A	ECBT1C103NS5	16V 0.01	1	
C104	ECFR1C223MR	16V 0.022	1	
C104A	ECBT1H102KB5	50V 1000P	1	
C105	ECBA1H681KB5	50V 680P	1	
C105A	ECBT1H102KB5	50V 1000P	1	
C106	ECBA1H681KB5	50V 680P	1	
C106A	ECBT1C103NS5	16V 0.01	1	
C107	ECBT1H473ZF5	50V 0.047	1	
C108	ECEA1CKS330	16V 33	1	
C108A	ECBT1H8R2KC5	50V 8.2P	1	
C109	ECEA1CKS101	16V 100	1	
C109A	ECBT1H102KB5	50V 1000P	1	
C110	ECBT1C103NS5	16V 0.01	1	
C111	ECBT1H561KB5	50V 560P	1	
C111A	ECEA1EKS4R7	25V 4.7	1	
C112	ECBT1H561KB5	50V 560P	1	
C112A	ECBT1C103NS5	16V 0.01	1	
C113	ECEA1AKS221	6.3V 220	1	
C113A	ECBT1H102KB5	50V 1000P	1	
C114	ECEA1AKS221	6.3V 220	1	
C114A	ECEA1HKS3R3	50V 3.3	1	
C115	ECFR1C333JR	16V 0.033	1	
C115A	ECEA1EKS4R7	25V 4.7	1	
C116	ECFR1C333JR	16V 0.033	1	
C116A	ECFR1C333KR	16V 0.033	1	
C117	ECEA1HKM010B	50V 1	1	
C117A	ECFR1C183KR	16V 0.018	1	
C118	ECEA1HKM010B	50V 1	1	
C118A	ECFR1C183KR	16V 0.018	1	
C119	ECEA1HKA4R7B	50V 4.7	1	
C119A	ECQP2A391JZT	100V 390P	1	
C120	ECEA1HKA4R7B	50V 4.7	1	
C120A	ECEA1CKS100	16V 10	1	
C121	ECEA1HKS010	50V 1	1	
C121A	ECEA1HKAR47B	50V 0.47	1	
C122, 2A	ECEA1HKS010	50V 1	2	
C123	ECBT1H102KB5	50V 1000P	1	
C123A	ECEA1HKS010	50V 1	1	
C124	ECBT1H102KB5	50V 1000P	1	
C124A	ECBT1H101KB5	50V 100P	1	
C125	ECFR1C473MR	16V 0.047	1	
C125A	ECEA1CKS220	16V 22	1	
C126	ECBT1H473ZF5	50V 0.047	1	
C126A	ECFR1C473MR	16V 0.047	1	
C127	ECBT1C103MS5	16V 0.01	1	
C127A	ECEA1CKS220	16V 22	1	
C128	ECBT1C103MS5	16V 0.01	1	
C129	ECBT1H821KB5	50V 820P	1	
C129A	ECEA0JKS101	6.3V 100	1	
C130	ECBT1H821KB5	50V 820P	1	
C130A	ECEA0JKS101	6.3V 100	1	
C131	ECBT1H101KB5	50V 100P	1	
C131A, 32	ECBT1H821KB5	50V 820P	2	
C132A	ECBT1H102KB5	50V 1000P	1	
C133	ECEA1HKA4R7B	50V 4.7	1	
C133A	ECBT1H150JC5	50V 15P	1	
C134	ECEA1HKA4R7B	50V 4.7	1	
C134A	ECBT1H180JC5	50V 18P	1	
C135, 36	ECBT1H102KB5	50V 1000P	2	
C136A	ECBT1H102KB5	50V 1000P	1	
C137	ECFR1C472KR	16V 4700P	1	
C138	ECBT1C103KS5	16V 0.01	1	
C139	ECEA1HKS2R2	50V 2.2	1	
C139A	ECFR1C472KR	16V 4700P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C140	ECEA1CKS100	16V 10	1	
C141	ECEA1HKS0R1	50V 0.1	1	
C141A	ECEA1HKS010	50V 1	1	
C142	ECFR1C223MR	16V 0.022	1	
C142A	ECEA1HKS010	50V 1	1	
C143	ECEA1HKA4R7B	50V 4.7	1	
C143A	ECBT1C472KR5	16V 4700P	1	
C144	ECEA1HKA4R7B	50V 4.7	1	
C144A	ECBT1C472KR5	16V 4700P	1	
C145, 46	ECEA1CKS100	16V 10	2	
C147	ECBT1C152KR5	16V 1500P	1	
C147A	ECBT1H102KB5	50V 1000P	1	
C148	ECBT1C152KR5	16V 1500P	1	
C148A	ECBT1C103NS5	16V 0.01	1	
C149	ECBT1H104ZF5	50V 0.1	1	
C150	ECEA1AKS470	10V 47	1	
C151, 52	ECEA1HKS010	50V 1	2	
C153, 54	ECBT1H102KB5	50V 1000P	2	
C155, 56	ECEA1CKS100	16V 10	2	
C161	ECEA1CKS101	16V 100	1	
C162	ECA1CM471	16V 470	1	
C163, 64	ECEA1HKM010B	50V 1	2	
C165, 66	ECEA1CKS100	16V 10	2	
C167, 68	ECEA1HKAR68B	50V 0.68	2	
C169, 70	ECEA1HKA4R7B	50V 4.7	2	
C171	ECEA1CKS100	16V 10	1	
C173	ECBT1C103MS5	16V 0.01	1	
C174	ECEA1HKA4R7B	50V 4.7	1	
C175	ECA1VM221	35V 220	1	
C176	ECQV1H473JZ3	50V 0.047	1	
C177, 78	ECBT1H102KB5	50V 1000P	2	
C179-81	ECBT1C103MS5	16V 0.01	3	
C182	ECEA1HKA4R7B	50V 4.7	1	
C183	ECQV1H474JZ3	50V 0.47	1	
C184	ECQP1152JZT	100V 1500P	1	
C185	ECQP2A472JZT	100V 4700P	1	
C186	ECEA1AKS470	10V 47	1	
C187, 88	ECBT1H101KB5	50V 100P	2	
C193, 94	ECBT1H102KB5	50V 1000P	2	
C201	ECEA1CKS101	16V 100	1	
C202	ECBT1H104ZF5	50V 0.1	1	
C203, 04	ECBT1H331KB5	50V 330P	2	
C205, 06	ECBT1C222KR5	16V 2200P	2	
C303, 04	ECBT1H101KB5	50V 100P	2	
C305	ECBT1H102KB5	50V 1000P	1	
C306	ECA1AM331	10V 330	1	
C307, 08	ECBT1H221KB5	50V 220P	2	
C309	ECBT1C152KR5	16V 1500P	1	
C310	ECEA1HKS0R1	50V 0.1	1	
C311, 12	ECEA1HKS010	50V 1	2	
C313, 14	ECFR1C563KR	16V 0.056	2	
C315, 16	ECEA1HKAR15B	50V 0.15	2	
C317, 18	ECFR1C223KR	16V 0.022	2	
C319, 20	ECFR1C393KR	16V 0.039	2	
C321, 22	ECFR1C223KR	16V 0.022	2	
C323, 24	ECBT1C332KR5	16V 3300P	2	
C325, 26	ECBT1C222KR5	16V 2200P	2	
C327, 28	ECBT1C272KR5	16V 2700P	2	
C329, 30	ECBT1C152KR5	16V 1500P	2	
C331, 32	ECFR1C333KR	16V 0.033	2	
C333, 34	ECBA1H681KB5	50V 680P	2	
C335, 36	ECBT1H102KB5	50V 1000P	2	
C337-40	ECEA1HKAR15B	50V 0.15	4	
C341, 42	ECBT1H102KB5	50V 1000P	2	
C343, 44	ECBT1H471KB5	50V 470P	2	
C345, 46	ECEA1HKA4R7B	50V 4.7	2	
C347, 48	ECEA1HKS010	50V 1	2	
C349, 50	ECEA1CKS100	16V 10	2	
C351, 52	ECBT1H101KB5	50V 100P	2	
C353, 54	ECBT1H470J5	50V 47P	2	
C355, 56	ECBT1E103ZF	25V 0.01	2	
C357, 58	ECBT1C332KR5	16V 3300P	2	
C359, 60	ECEA1CKS100	16V 10	2	
C361, 62	ECFR1C153MR	16V 0.015	2	
C365, 66	ECFR1C104MR	16V 0.1	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C368	ECBT1H102KB5	50V 1000P	1	
C369, 70	ECEA1HKS2R2	50V 2.2	2	
C371-73	ECBT1H104ZF5	50V 0.1	3	
C374-76	ECBT1H470J5	50V 47P	3	
C385	ECBT1E103ZF	25V 0.01	1	
C390	ECEA1HKS3R3	50V 3.3	1	
C391, 92	ECQV1H683JZ3	50V 0.068	2	
C393, 94	ECBT1H101KB5	50V 100P	2	
C395	ECBT1H221KB5	50V 220P	1	
C501-04	ECKR2H103ZF5	500V 0.01	4	
⚠ C506, 07	ECEA1HM332B	50V 3300	2	
⚠ C508	ECA1EM222	25V 2200	1	
C509, 10	ECKR1H103ZF5	50V 0.01	2	
C511	ECBT1H473ZF5	50V 0.047	1	
C512	ECEA1CM471B	16V 470	1	
C513	ECBT1H102KB5	50V 1000P	1	
C514	ECEA1AKS101	10V 100	1	
C515	ECBT1E103ZF	25V 0.01	1	
C516	ECEA1AKS220	10V 22	1	
C517	ECBT1E103ZF	25V 0.01	1	
C518	ECEA1CKA470B	16V 47	1	
C519, 20	ECBT1E103ZF	25V 0.01	2	
C521	ECEA1CKS330	16V 33	1	
C522	ECEA1EM101B	25V 100	1	
C523	RCA1EM102BT	25V 1000	1	
C524	ECBT1E103ZF	25V 0.01	1	
C525	ECEA1AKS330	10V 33	1	
C526	ECBT1E103ZF	25V 0.01	1	
C527	ECA1AM331	10V 330	1	
C528	ECEA1HKA4R7B	50V 4.7	1	
C529	ECEA1HM101B	50V 100	1	
C530	ECEA1JM101B	63V 100	1	
C531	ECKR2H102ZF5	00V 1000P5	1	
C532	ECEA1VKA100B	35V 10	1	
C533	ECEA1HM101B	50V 100	1	
C534	ECEA0JKS470	6.3V 47	1	
C535	ECBT1E103ZF	25V 0.01	1	
C603, 04	ECBT1H102KB5	50V 1000P	2	
C605, 06	ECBT1H331KB5	50V 330P	2	
C607, 08	ECEA1HKS010	50V 1	2	
C609, 10	ECBT1H150J5	50V 15P	2	
C611, 12	ECBT1H473ZF5	50V 0.047	2	
C615, 16	RCE2AU100BT	100V 10	2	
C617	ECEA1AKS221	6.3V 220	1	
C618	ECBT1H102KB5	50V 1000P	1	
C621-24	ECBT1H473ZF5	50V 0.047	4	
C630, 31	ECBT1E103ZF	25V 0.01	2	
C646, 47	ECBT1H101KB5	50V 100P	2	
C701	ECEA0JKA330I	6.3V 33	1	
C702	ECUZ1E104MBN	25V 0.1	1	
C703	ECEA0JKS101	6.3V 100	1	
C704	ECUZ1E104MBN	25V 0.1	1	
C706	ECUZ1H272KBN	50V 2700P	1	
C707	ECUZ1E273KBN	25V 0.027	1	
C710	ECUV1H151KCN	50V 150P	1	
C711, 12	ECUZ1E104ZFN	25V 0.1	2	
C713	ECUZ1E104MBN	25V 0.1	1	
C714	ECEA0JKS101	6.3V 100	1	
C715	ECUZ1H182KBN	50V 1800P	1	
C716	ECUZ1H821KBN	50V 820P	1	
C717	ECUZ1E104ZFN	25V 0.1	1	
C718	ECUZ1C224KBN	16V 0.22	1	
C721, 22	ECUZ1H150JCN	50V 15P	2	
C723	ECEA1AKS221	10V 220	1	
C724	ECUZ1E104MBN	25V 0.1	1	
C725, 26	ECUZ1H102KBN	50V 1000P	2	
C727, 28	ECA1HAK010XI	50V 1	2	
C730	ECUZ1E104ZFN	25V 0.1	1	
C731, 32	ECEA1AKS221	6.3V 220	2	
C733	ECUZ1E104MBN	25V 0.1	1	
C734	ECEA1AKS221	10V 220	1	
C735-37	ECUZ1E104ZFN	25V 0.1	3	
C738	ECUZ1E104MBN	25V 0.1	1	
C739	ECUZ1H103KBN	50V 0.01	1	
C742	ECUZ1E273KBN	25V 0.027	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C743	ECUZ1E104ZFN	25V 0.1	1	
C744	ECUZ1E123KBN	25V 0.012P	1	
C745	ECUZ1C473MBM	16V 0.047	1	
C747	ECUV1H221KBN	50V 220P	1	
C749	ECUZ1H222KBN	50V 2200P	1	
C750, 51	ECUZ1E104MBN	25V 0.1	2	
C752	ECUV1H332KBN	50V 3300P	1	
C753	ECUZ1H471KBM	50V 470P	1	
C754	ECUZ1H471KBN	50V 470P	1	
C761, 62	ECUZ1H471KBN	50V 470P	2	
C810	ECBT1E103ZF	25V 0.01	1	
C819	ECBT1E103ZF	25V 0.01	1	
C822, 23	ECBT1H101KB5	50V 100P	2	
C838, 39	ECBT1H101KB5	50V 100P	2	
C849, 50	ECEA1CKS100	16V 10	2	
C853	ECFR1C473KR	16V 0.047	1	
C854	ECFR1C683KR	16V 0.068	1	
C855	ECFR1C563KR	16V 0.056	1	
C856	ECFR1C683KR	16V 0.068	1	
C857	ECFR1C823MR	16V 0.082	1	
C859, 60	ECBT1H101KB5	50V 100P	2	
C876	ECEA1CKS330	16V 33	1	
C879	ECFR1C683KR	16V 0.068	1	
C880	ECFR1C473KR	16V 0.047	1	
C881	ECQV1H154JZ3	50V 0.15	1	
C884	ECFR1C104KR	16V 0.1	1	
C885	ECBT1C472KR5	16V 4700P	1	
C890, 91	ECEA1HKS010	50V 1	2	
C895	ECBT1H101KB5	50V 100P	1	
C896	ECEA0JKS220	6.3V 22	1	
C901	ECBT1H101KB5	50V 100P	1	
C902	ECBT1H104ZF5	50V 0.1	1	
C903-07	ECBT1H101KB5	50V 100P	5	
C908, 09	ECBT1C103MS5	16V 0.01	2	
C910	ECBT1H561KB5	50V 560P	1	
C911	ECBT1H104ZF5	50V 0.1	1	
C912	ECBT1H561KB5	50V 560P	1	
C913, 14	ECBT1H102KB5	50V 1000P	2	
C916	ECBT1E103ZF	25V 0.01	1	
C917	ECBT1H331KB5	50V 330P	1	
C918, 19	ECBT1H561KB5	50V 560P	2	
C927	ECBT1H561KB5	50V 560P	1	
C929, 30	ECBT1H561KB5	50V 560P	2	
C932	ECBT1H561KB5	50V 560P	1	
C933	ECBT1H101KB5	50V 100P	1	
C935-37	ECBT1E103ZF	25V 0.01	3	
C938	ECBT1H150JC5	50V 15P	1	
C939	ECBT1H180JC5	50V 18P	1	
C940, 41	ECBT1H680J5	50V 68P	2	
C942, 43	ECBT1H560J5	50V 56P	2	
C944, 45	ECBT1H102KB5	50V 1000P	2	
C946, 47	ECBT1E103ZF	25V 0.01	2	
C948	ECBT1H471KB5	50V 470P	1	
C949, 50	ECBT1H102KB5	50V 1000P	2	
C951	ECEA1VKA220B	35V 22	1	
C953	ECEA0JKS101	6.3V 100	1	
C954	ECEA0JM102B	6.3V 1000	1	
C956	ECEA1AKS220	10V 22	1	
C963	ECEA1CKS100	16V 10	1	
C965	ECEA1VKA220B	35V 22	1	
C966-69	ECEA1HKS0R1	50V 0.1	4	
C970, 71	ECEA1HKS010	50V 1	2	
C972	ECA1AM331	10V 330	1	
C973	ECA1HM3R3	50V 3.3	1	
C975, 76	ECBT1H101KB5	50V 100P	2	
C993, 94	ECBT1E223ZF	25V 0.022	2	
C999	ECBT1H102KB5	50V 1000P	1	
CF201	RLFFETNGD01L	CERAMIC FILTER	1	
CF202	RLFFETMGD01L	CERAMIC FILTER	1	
CN1	RJS1A6714	CONNECTOR(14P)	1	
CN100	RJS1A5210	CONNECTOR(10P)	1	
CN101B, 2B	RJU100W07	CONNECTOR(7P)	2	
CN201	RJS8T7ZA	CONNECTOR(8P)	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
CN501B	RJS1A6604	CONNECTOR(4P)	1	
CN501A	RJS1A6605	CONNECTOR(5P)	1	
CN503, 04	RJU057W012	CONNECTOR(12P)	2	
CN701	RJS2A6016	CONNECTOR(16P)	1	
CN702	RJS1A6723-1Q	CONNECTOR(23P)	1	
CN901	RJS1A6214-1	CONNECTOR(14P)	1	
CN902	RJS1A6223-1	CONNECTOR(23P)	1	
CN903	RJS1A9320	CONNECTOR(20P)	1	
CN903	RJS1A9420	CONNECTOR(20P)	1	
CN904	RJS1A9323	CONNECTOR(23P)	1	
CN904	RJS1A9423	CONNECTOR(23P)	1	
CN906	RJU071H11M	CONNECTOR(11P)	1	
CP1, P2	RJT100W07	CONNECTOR(7P)	2	
CP101, 02	RJT071H09A	CONNECTOR(9P)	2	
CP503, 04	RJT057W012-1	CONNECTOR(12P)	2	
CP906	RJT071H11A	CONNECTOR(11P)	1	
CS101, 02	RJS1A6805-J	CONNECTOR(5P)	2	
CS951	RJU071H09M	CONNECTOR(9P)	1	
CS971	RJU071H09M	CONNECTOR(9P)	1	
⚠ D101	MTZJ5R1BTA	DIODE	1	
D171	RVD1SS133TA	DIODE	1	
D172	MTZJ4R7BTA	DIODE	1	
D173	RVD1SS133TA	DIODE	1	
D174	MTZJ3R6BTA	DIODE	1	
D175	RVD1SS133TA	DIODE	1	
D201, 02	RVD1SS133TA	DIODE	2	
D302	RVD1SS133TA	DIODE	1	
⚠ D331	MTZJ5R1BTA	DIODE	1	
D332	MTZJ5R1BTA	DIODE	1	
⚠ D501-04	1N5402BM21	DIODE	4	
⚠ D505	1D3E	DIODE	1	
⚠ D507	1D3E	DIODE	1	
⚠ D509-12	1D3E	DIODE	4	
⚠ D513	MTZJ5R1CTA	DIODE	1	
⚠ D515	MTZJ16ATA	DIODE	1	
⚠ D516	MTZJ8R2BTA	DIODE	1	
D517	RVD1SS133TA	DIODE	1	
⚠ D518	MTZJ9R1CTA	DIODE	1	
⚠ D519	MTZJ5R6BTA	DIODE	1	
⚠ D520	MTZJ11CTA	DIODE	1	
D521	1D3E	DIODE	1	
⚠ D522	MTZJ6R8ATA	DIODE	1	
⚠ D523	MTZJ30DTA	DIODE	1	
D525-29	RVD1SS133TA	DIODE	5	
⚠ D530, 31	1D3E	DIODE	2	
D532, 33	RVD1SS133TA	DIODE	2	
D538, 39	1D3E	DIODE	2	
D601	MTZJ16ATA	DIODE	1	
D704	RVD1SS133TA	DIODE	1	
D803, 04	RVD1SS133TA	DIODE	2	
D806, 07	RVD1SS133TA	DIODE	2	
D901-08	LNJ301MPUJAD	LED	8	
D916-19	LNJ301MPUJAD	LED	4	
D920	SLR325DCT31	LED	1	
D921	LNJ301MPUJAD	LED	1	
D924	LNJ301MPUJAD	LED	1	
D927	SLR325DCT31	LED	1	
D951	MA165	DIODE	1	
D965	RVD1SS133TA	DIODE	1	
D971	MA165	DIODE	1	
D971A	RVD1SS133TA	DIODE	1	
D973, 74	1SS291TA	DIODE	2	
D975, 76	RVD1SS133TA	DIODE	2	
D977	1SS291TA	DIODE	1	
D978-80	RVD1SS133TA	DIODE	3	
D981	1SS291TA	DIODE	1	
D982-85	RVD1SS133TA	DIODE	4	
D986	1D3E	DIODE	1	
⚠ D987	MA4020LTA	DIODE	1	
D990, 91	LNH301MPU0A2	LED	2	
E500	SNE1004-2	EARTH TERMINAL	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
⚠ F1	XBA2C12TB0S	FUSE, T1. 25A	1	
FC501, 02	EYF52BC	FUSE HOLDER	2	
FL901	RSL0249-F	FL DISPLAY	1	
H100	RMR0319	CABLE HOLDER (10P)	1	
H201	RMR0317	CABLE HOLDER (8P)	1	
H501	RJS1A5509	CABLE HOLDER (9P)	1	
IC1	BA6418N	IC	1	
IC101A	LA1833M-TLM	IC	1	
IC101	M51167BFP	IC	1	
IC102	BA7755A	IC	1	
IC102A	LC72131MDTRM	IC	1	
IC103	CXA1102M-T4	IC	1	
IC104	BU4066BCF-E2	IC	1	
IC105	BU2040F-E2	IC	1	
IC301	M62433AFP	IC	1	
IC302	M5218AP	IC	1	
⚠ IC501	BA178M05T	IC	1	
⚠ IC601	RSN3502A	IC	1	
IC701	AN8837SBE1	IC	1	
IC702	MN662746RPK1	IC	1	
IC703	AN8780NSBE2	IC	1	
IC802	M5228FPE1	IC	1	
IC804	M5228FPE1	IC	1	
IC901	M38198MCA809	IC	1	
IC902	BA3835F-E2	IC	1	
IC903, 04	BU2090F-E2	IC	2	
IC951	ON2180RLC	IC	1	
IC971	ON2180RLC	IC	1	
JK101	RJH5210M	JACK, ANTENNA	1	
JK301	RJH2206	JACK, AUX	1	
⚠ JK500	SJS9236	JACK, AC INLET	1	
JK601	RJR0054B-J	JACK, SPEAKERS (LOW)	1	
JK602	RJR0054C-J	JACK, SPEAKERS (HIGH)	1	
JK903	RJJ37TK07-H	JACK, HEADPHONE	1	
L101, 02	ELESNR68MA	COIL	2	
L103	ELEXTR47MA9	COIL	1	
L201	RL08C002M-T	COIL	1	
L202	RLQZB470KT-D	COIL	1	
⚠ L500	RLQZ271M	COIL	1	
L601, 02	RLQYR73MW-E	COIL	2	
L901	RLQZP3R3KT-Y	COIL	1	
L902	RLQZP101KT-Y	COIL	1	
L905	RLQZP101KT-Y	COIL	1	
L908	RLQZP100KT-Y	COIL	1	
L909, 10	RLQZP101KT-Y	COIL	2	
P1	RPFX0007	BAG (SET)	1	
P2	RPG3649	PACKING CASE	1	(E, EB, EG)
P2	RPG3682	PACKING CASE	1	(EE)
P3	RPN1089	POLY FOAM	1	
P4	XZB25X34C03X	VINYL BAG	1	
P5	SPSD155	ACCESSORY CASE	1	
Q101	2SJ164QRTA	TRANSISTOR	1	
Q101A	2SC2787L	TRANSISTOR	1	
Q102	2SJ164QRTA	TRANSISTOR	1	
Q102A	2SC2787L	TRANSISTOR	1	
Q103, 04	2SJ164QRTA	TRANSISTOR	2	
Q106	RVTDTA114SET	TRANSISTOR	1	
Q107, 08	BA1L4ZTA	TRANSISTOR	2	
Q115, 16	2SD1020HTA	TRANSISTOR	2	
Q117	BA1L4MTA	TRANSISTOR	1	
Q118-21	2SC2785FE	TRANSISTOR	4	
Q151, 52	BA1L4ZTA	TRANSISTOR	2	
Q153, 54	2SC1740SLNET	TRANSISTOR	2	
Q171	2SD1302STA	TRANSISTOR	1	
Q173	BA1L4ZTA	TRANSISTOR	1	
Q174	2SC2785FE	TRANSISTOR	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q175, 76	2SD1302STA	TRANSISTOR	2	
Q179	2SC2784FTA	TRANSISTOR	1	
Q203	2SD965Q	TRANSISTOR	1	
Q206, 07	2SB621R	TRANSISTOR	2	
Q208, 09	BA1A4ZTA	TRANSISTOR	2	
Q218	BN1A4MTA	TRANSISTOR	1	
Q220	BN1L3NTA	TRANSISTOR	1	
Q303, 04	2SD1020HTA	TRANSISTOR	2	
Q305	RVTDTA114TST	TRANSISTOR	1	
⚠ Q501	2SD2395E	TRANSISTOR	1	
⚠ Q503	2SD2395E	TRANSISTOR	1	
⚠ Q504	2SB1566E	TRANSISTOR	1	
Q505	2SC1740SQ	TRANSISTOR	1	
⚠ Q507, 08	2SD2395E	TRANSISTOR	2	
Q509	RVTDTA114SET	TRANSISTOR	1	
Q510	RVTDTC114ES	TRANSISTOR	1	
⚠ Q511	2SC2001K	TRANSISTOR	1	
⚠ Q512	2SD2395E	TRANSISTOR	1	
⚠ Q513	KSD471ACYGTA	TRANSISTOR	1	
⚠ Q514	2SB1238QRTV2	TRANSISTOR	1	
Q515	RVTDTC114TST	TRANSISTOR	1	
Q516	2SA933SSTA	TRANSISTOR	1	
Q519	2SC1740SQ	TRANSISTOR	1	
Q520	2SA933SSTA	TRANSISTOR	1	
Q551	2SC2785FE	TRANSISTOR	1	
Q601, 02	2SC1740SQ	TRANSISTOR	2	
Q701	2SA1037AKSTX	TRANSISTOR	1	
Q702	DTC114YKA146	TRANSISTOR	1	
Q808, 09	2SD1020HTA	TRANSISTOR	2	
Q811	2SC2785FE	TRANSISTOR	1	
Q812, 13	RVTDTA114TST	TRANSISTOR	2	
Q924	2SC1740SQ	TRANSISTOR	1	
Q927	2SC1740SQ	TRANSISTOR	1	
Q929, 30	2SC1740SQ	TRANSISTOR	2	
Q932, 33	2SC1740SQ	TRANSISTOR	2	
Q934	RVTDTC124EST	TRANSISTOR	1	
Q935	2SB621A-R	TRANSISTOR	1	
R101	ERDS2FJ334	1/4W 330K	1	
R102	ERDS2FJ104	1/4W 100K	1	
R102A	ERDS2FJ472	1/4W 4.7K	1	
R103	ERDS2FJ153	1/4W 15K	1	
R103A	ERDS2FJ101	1/4W 100	1	
R104	ERDS2FJ153	1/4W 15K	1	
R104A	ERDS2FJ103	1/4W 10K	1	
R105	ERDS2FJ271	1/4W 270	1	
R105A	ERDS2FJ471	1/4W 470	1	
R106	ERDS2FJ222	1/4W 2.2K	1	
R106A	ERDS2FJ474	1/4W 470K	1	
R107	ERDS2FJ330	1/4W 33	1	
R107A	ERDS2FJ331	1/4W 330	1	
R108	ERDS2FJ330	1/4W 33	1	
R108A	ERDS2FJ474	1/4W 470K	1	
R109	ERDS2FJ432	1/4W 4.3K	1	
R109A	ERDS2FJ331	1/4W 330	1	
R110	ERDS2FJ432	1/4W 4.3K	1	
R110A	ERDS2FJ102	1/4W 1K	1	
R111	ERDS2FJ222	1/4W 2.2K	1	
R111A	ERDS2FJ391	1/4W 390	1	
R112	ERDS2FJ222	1/4W 2.2K	1	
R112A	ERDS2FJ104	1/4W 100K	1	
R113	ERDS2FJ103	1/4W 10K	1	
R114	ERDS2FJ562	1/4W 5.6K	1	
R115	ERDS2FJ474	1/4W 470K	1	
R115A	ERDS2FJ561	1/4W 560	1	
R116	ERDS2FJ474	1/4W 470K	1	
R116A	ERDS2FJ102	1/4W 1K	1	
R117	ERDS2FJ274	1/4W 270K	1	
R117A	ERDS2FJ683	1/4W 68K	1	
R118	ERDS2FJ274	1/4W 270K	1	
R118A	ERDS2FJ472	1/4W 4.7K	1	
R119	ERDS2FJ333	1/4W 33K	1	
R120	ERDS2FJ473	1/4W 47K	1	
R121	ERDS2FJ333	1/4W 33K	1	
R121A	ERDS2FJ223	1/4W 22K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R122	ERDS2FJ272	1/4W 2.7K	1	
R122	ERDS2FJ333	1/4W 33K	1	
R123	ERDS2FJ103	1/4W 10K	1	
R123A	ERDS2FJ683	1/4W 68K	1	
R124	ERDS2FJ103	1/4W 10K	1	
R124A	ERDS2FJ391	1/4W 390	1	
R125	ERDS2FJ102	1/4W 1K	1	
R125A	ERDS2FJ471	1/4W 470	1	
R126	ERDS2FJ102	1/4W 1K	1	
R126A	ERDS2FJ152	1/4W 1.5K	1	
R127	ERDS2FJ471	1/4W 470	1	
R128	ERDS2FJ820	1/4W 82	1	
R129	ERDS2FJ822	1/4W 8.2K	1	
R129A	ERDS2FJ273	1/4W 27K	1	
R130	ERDS2FJ822	1/4W 8.2K	1	
R130A	ERDS2FJ103	1/4W 10K	1	
R131	ERDS2FJ683	1/4W 68K	1	
R131A	ERDS2FJ680	1/4W 68	1	
R132	ERDS2TJ335T	1/4W 3.3M	1	
R132A	ERDS2FJ103	1/4W 10K	1	
R133	ERDS2FJ332	1/4W 3.3K	1	
R133A	ERDS2FJ102	1/4W 1K	1	
R134	ERDS2FJ474	1/4W 470K	1	
R134A	ERDS2FJ471	1/4W 470	1	
R135, 36	ERDS2FJ102	1/4W 1K	2	
R137	ERDS2FJ103	1/4W 10K	1	
R137A	ERDS2FJ102	1/4W 1K	1	
R138-39	ERDS2FJ103	1/4W 10K	3	
R141	ERDS2FJ682	1/4W 6.8K	1	
R141A	ERDS2FJ102	1/4W 1K	1	
R142	ERDS2FJ682	1/4W 6.8K	1	
R142A	ERDS2FJ102	1/4W 1K	1	
R143	ERDS2FJ222	1/4W 2.2K	1	
R143A	ERDS2FJ223	1/4W 22K	1	
R144	ERDS2FJ222	1/4W 2.2K	1	
R145	ERDS2FJ103	1/4W 10K	1	
R145A	ERDS2FJ104	1/4W 100K	1	
R146	ERDS2FJ103	1/4W 10K	1	
R146A	ERDS2FJ104	1/4W 100K	1	
R149	ERDS2FJ272	1/4W 2.7K	1	
R150	ERDS2FJ272	1/4W 2.7K	1	
R151, 52	ERDS2FJ105	1/4W 1M	2	
R153, 54	ERDS2FJ102	1/4W 1K	2	
R155, 56	ERDS2FJ681	1/4W 680	2	
R158	ERDS2FJ221	1/4W 220	1	
R159, 60	ERDS2FJ222	1/4W 2.2K	2	
R161, 62	ERDS2FJ472	1/4W 4.7K	2	
R163	ERDS2FJ433	1/4W 43K	1	
R165	ERDS2FJ563	1/4W 56K	1	
R166	ERDS2FJ104	1/4W 100K	1	
R167	ERDS2FJ470	1/4W 47	1	
R170	ERDS2FJ102	1/4W 1K	1	
R172	ERDS2FJ331	1/4W 330	1	
R173, 74	ERDS2FJ103	1/4W 10K	2	
R176	ERDS2FJ822	1/4W 8.2K	1	
R177	ERDS2FJ472	1/4W 4.7K	1	
R178	ERDS2FJ1R2	1/4W 1.2	1	
R179, 80	ERDS2FJ472	1/4W 4.7K	2	
R181	ERDS2FJ332	1/4W 3.3K	1	
R182	ERDS2FJ1R0	1/4W 1	1	
R183-85	ERDS2FJ104	1/4W 100K	3	
R186, 88	ERDS2FJ102	1/4W 1K	2	
R189	ERDS2FJ472	1/4W 4.7K	1	
R190	ERDS2FJ104	1/4W 100K	1	
R191	ERDS2FJ563	1/4W 56K	1	
R192	ERDS2FJ470	1/4W 47	1	
R193-95	ERDS2FJ104	1/4W 100K	3	
R206	ERDS2FJ221	1/4W 220	1	
R208	ERDS2FJ103	1/4W 10K	1	
R209	ERDS2FJ332	1/4W 3.3K	1	
R213	ERDS2FJ152	1/4W 1.5K	1	
R215, 16	ERDS2FJ222	1/4W 2.2K	2	
R220	ERDS2FJ472	1/4W 4.7K	1	
R221, 25	ERDS2FJ2R7	1/4W 2.7	2	
R226, 27	ERDS2FJ102	1/4W 1K	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R228	ERDS2FJ472	1/4W 4.7K	1	
R229	ERDS2FJ103	1/4W 10K	1	
R230	ERDS2FJ472	1/4W 4.7K	1	
R232	ERDS2FJ102	1/4W 1K	1	
R233	ERDS2FJ222	1/4W 2.2K	1	
R234-36	ERDS2FJ472	1/4W 4.7K	3	
R305, 06	ERDS2FJ103	1/4W 10K	2	
R307, 08	ERDS2FJ332	1/4W 3.3K	2	
R309, 10	ERDS2FJ103	1/4W 10K	2	
R311, 12	ERDS2FJ152	1/4W 1.5K	2	
R313, 14	ERDS2FJ272	1/4W 2.7K	2	
R315	ERDS2FJ100	1/4W 10	1	
R316	ERDS2FJ103	1/4W 10K	1	
R317	ERDS2FJ223	1/4W 22K	1	
R318	ERDS2FJ103	1/4W 10K	1	
R319	ERDS2FJ183	1/4W 18K	1	
R320	ERDS2FJ223	1/4W 22K	1	
R321-26	ERDS2FJ222	1/4W 2.2K	6	
R327, 28	ERDS2FJ273	1/4W 27K	2	
R329, 30	ERDS2FJ561	1/4W 560	2	
R331, 32	ERDS2FJ102	1/4W 1K	2	
R339, 40	ERDS2FJ332	1/4W 3.3K	2	
R341, 42	ERDS2FJ392	1/4W 3.9K	2	
R343, 44	ERDS2FJ472	1/4W 4.7K	2	
R345, 46	ERDS2FJ102	1/4W 1K	2	
R347, 48	ERDS2FJ473	1/4W 47K	2	
R349, 50	ERDS2FJ222	1/4W 2.2K	2	
R351, 52	ERDS2FJ153	1/4W 15K	2	
R353-56	ERDS2FJ390	1/4W 39	4	
R357, 58	ERDS2FJ101	1/4W 100	2	
R359, 60	ERDS2FJ392	1/4W 3.9K	2	
R361, 62	ERDS2FJ104	1/4W 100K	2	
R363	ERDS2FJ103	1/4W 10K	1	
R364	ERDS2FJ123	1/4W 12K	1	
R365	ERDS2FJ332	1/4W 3.3K	1	
R366	ERDS2FJ154	1/4W 150K	1	
R367	ERDS2FJ683	1/4W 68K	1	
R377	ERDS2FJ472	1/4W 4.7K	1	
R379	ERDS2FJ472	1/4W 4.7K	1	
R380-82	ERDS2FJ222	1/4W 2.2K	3	
R383	ERDS2FJ271	1/4W 270	1	
R384	ERDS2FJ102	1/4W 1K	1	
R385	ERDS2FJ472	1/4W 4.7K	1	
R387, 88	ERDS2FJ102	1/4W 1K	2	
R389	ERDS2FJ222	1/4W 2.2K	1	
R391, 92	ERDS2FJ103	1/4W 10K	2	
R393, 94	ERDS2FJ563	1/4W 56K	2	
R395, 96	ERDS2FJ683	1/4W 68K	2	
R397	ERDS2FJ122	1/4W 1.2K	1	
R398	ERDS2FJ2R7	1/4W 2.7	1	
R399	ERDS2FJ471	1/4W 470	1	
⚠ R501, 02	ERDS1FJ470	1/2W 47	2	
R503	ERDS2FJ332	1/4W 3.3K	1	
R504, 05	ERDS2FJ562	1/4W 5.6K	2	
R506	ERDS2FJ223	1/4W 22K	1	
⚠ R508	ERDS1FJ681	1/2W 680	1	
⚠ R510	ERDS1FJ681	1/2W 680	1	
⚠ R511	ERDS1FJ182	1/2W 1.8K	1	
R512	ERDS2FJ680	1/4W 68	1	
R513	ERDS2FJ561	1/4W 560	1	
⚠ R514	ERDS1FJ6R8	1/2W 6.8	1	
R515	ERDS2FJ151	1/4W 150	1	
R516	ERDS2FJ152	1/4W 1.5K	1	
⚠ R517, 18	ERDS1FJ330	1/2W 33	2	
⚠ R519	ERDS1FJ6R8	1/2W 6.8	1	
R520	ERDS2FJ332	1/4W 3.3K	1	
⚠ R521	ERDS1FJ152	1/2W 1.5K	1	
R522, 23	ERDS2FJ560	1/4W 56	2	
R524, 25	ERDS2FJ272	1/4W 2.7K	2	
R526	ERDS2FJ391	1/4W 390	1	
R527	ERDS2FJ560	1/4W 56	1	
R528	ERDS2FJ561	1/4W 560	1	
⚠ R529	ERDS1FJ150	1/2W 15	1	
⚠ R530-32	ERDS1FJ270	1/2W 27	3	
R533	ERDS2FJ182	1/4W 1.8K	1	

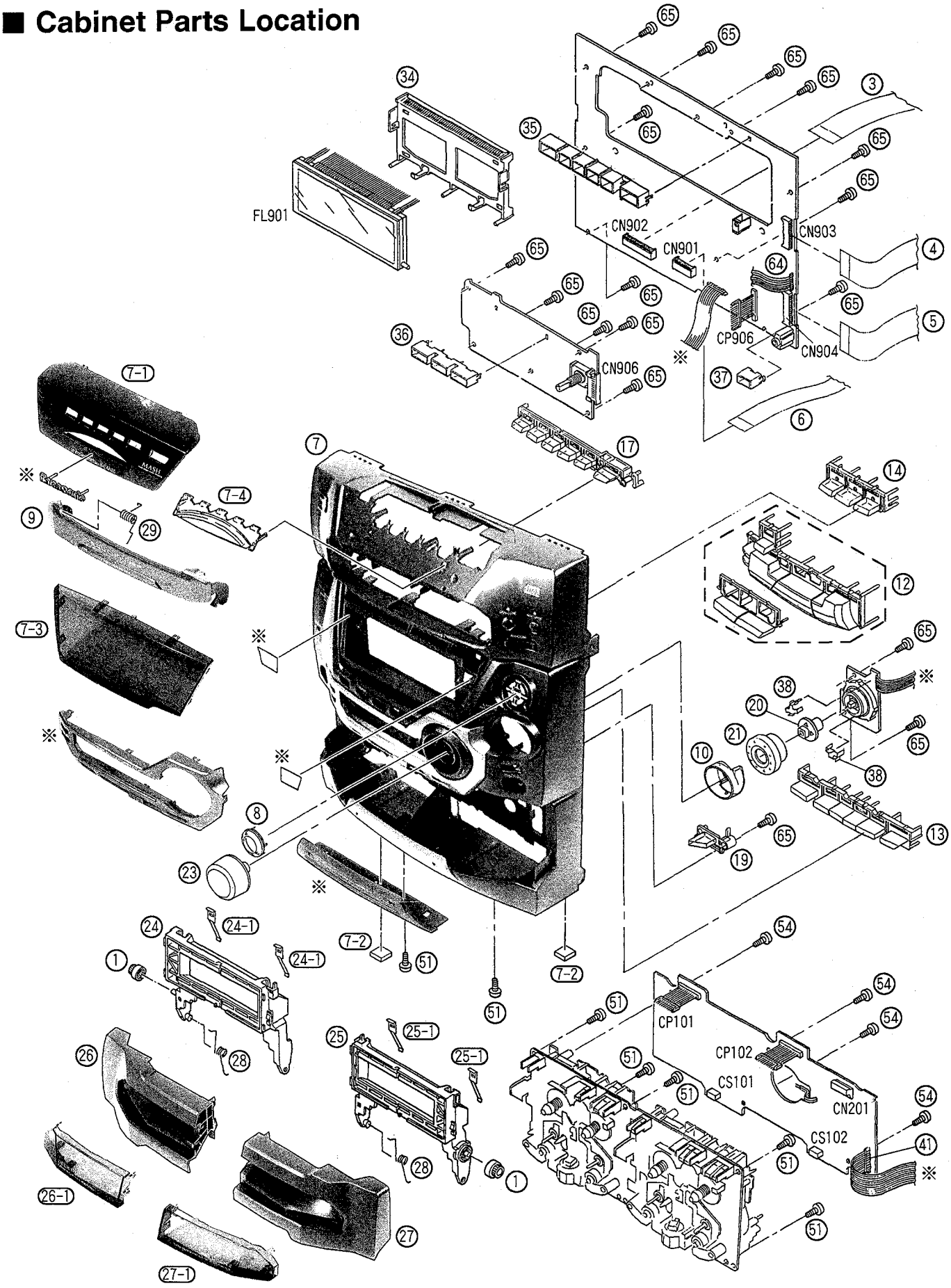
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R534	ERDS2FJ151 .	1/4W 150	1	
⚠ R535	ERD2FCJ4R7	1/4W 4.7	1	
R536	ERDS2FJ472	1/4W 4.7K	1	
R537	ERDS2FJ151	1/4W 150	1	
R538	ERDS2FJ153	1/4W 15K	1	
R539	ERDS2FJ393	1/4W 39K	1	
⚠ R540	ERDS1FJ681	1/2W 680	1	
R540A	ERDS2FJ472	1/4W 4.7K	1	
⚠ R541, 42	ERDS1FJ390	1/2W 39	2	
⚠ R543-45	ERDS1FJ6R8	1/2W 6.8	3	
R546	ERDS2FJ683	1/4W 68K	1	
R547	ERDS2FJ224	1/4W 220K	1	
R548, 49	ERDS1FJ6R8	1/2W 6.8	2	
R551	ERDS2FJ103	1/4W 10K	1	
R591, 92	RSFMB40KT-L	FUSE PROTECTOR	2	
R601, 02	ERDS2FJ102	1/4W 1K	2	
R603, 04	ERDS2FJ683	1/4W 68K	2	
R605, 06	ERDS2FJ562	1/4W 5.6K	2	
R607, 08	ERDS2FJ683	1/4W 68K	2	
⚠ R611, 12	ERDS1FJ100	1/2W 10	2	
R613	ERDS2FJ124	1/4W 120K	1	
R614	ERDS2FJ104	1/4W 100K	1	
R615	ERDS2FJ334	1/4W 330K	1	
R616	ERDS2FJ223	1/4W 22K	1	
R617	ERDS2FJ104	1/4W 100K	1	
⚠ R618	ERDS1FJ222	1/2W 2.2K-	1	
R619	ERDS2FJ103	1/4W 10K	1	
R639, 40	ERDS2FJ100	1/4W 10	2	
R700	ERDS2FJ104	1/4W 100K	1	
R701	ERJ6GEYJ4R7A	1/10W 4.7	1	
R701A	ERDS2FJ104	1/4W 100K	1	
R702	ERJ6GEYJ822A	1/10W 8.2K	1	
R702A	ERDS2FJ102	1/4W 1K	1	
R704	ERJ6GEYJ102A	1/10W 1K	1	
R705	ERJ6GEYJ124A	1/10W 120K	1	
R705A	ERDS2FJ103	1/4W 10K	1	
R706	ERJ6GEYJ102A	1/10W 1K	1	
R706A	ERDS2FJ103	1/4W 10K	1	
R707	ERJ6GEYJ474A	1/10W 470K	1	
R707A	ERDS2FJ103	1/4W 10K	1	
R708	ERJ6GEYJ154A	1/10W 150K	1	
R708A	ERDS2FJ102	1/4W 1K	1	
R709	ERJ6GEYJ473A	1/10W 47K	1	
R709A	ERDS2FJ101	1/4W 100	1	
R710	ERJ6GEYJ103A	1/10W 10K	1	
R710A	ERDS2FJ101	1/4W 100	1	
R711	ERJ6GEYJ154A	1/10W 150K	1	
R711A	ERDS2FJ101	1/4W 100	1	
R712	ERJ6GEYJ221A	1/10W 220	1	
R712A	ERDS2FJ101	1/4W 100	1	
R713	ERDS2FJ103	1/4W 10K	1	
R714	ERDS2FJ223	1/4W 22K	1	
R715	ERJ6GEYJ122A	1/10W 1.2K	1	
R715A	ERDS2FJ104	1/4W 100K	1	
R717, 18	ERJ6GEYJ102A	1/10W 1K	2	
R718A	ERDS2FJ152	1/4W 1.5K	1	
R719	ERJ6GEYJ102A	1/10W 1K	1	
R720	ERDS2FJ223	1/4W 22K	1	
R720A	ERJ6GEYJ102A	1/10W 1K	1	
R721	ERJ6GEYJ101A	1/10W 100	1	
R723	ERJ6GEYJ272A	1/10W 2.7K	1	
R724	ERJ6GEYJ333A	1/10W 33K	1	
R725	ERJ6GEYJ122A	1/10W 1.2K	1	
R727, 28	ERJ6GEYJ682A	1/10W 6.8K	2	
R729	ERJ6GEYJ562A	1/10W 5.6K	1	
R731	ERJ6GEYJ123A	1/10W 12K	1	
R732	ERDS2FJ103	1/4W 10K	1	
R734-36	ERJ6GEYJ101A	1/10W 100	3	
R738	ERJ6GEYJ223A	1/10W 22K	1	
R741	ERJ6GEYJ562A	1/10W 5.6K	1	
R741A	ERDS2FJ224	1/4W 220K	1	
R742	ERJ6GEYJ562A	1/10W 5.6K	1	
R742A	ERDS2FJ103	1/4W 10K	1	
R743	ERJ6GEYJ562A	1/10W 5.6K	1	
R743A	ERDS2FJ103	1/4W 10K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R744	ERJ6GEYJ104A	1/10W 100K	1	
R744A	ERDS2FJ473	1/4W 47K	1	
R745	ERJ6GEYJ155A	1/10W 1.5M	1	
R745A	ERDS2FJ473	1/4W 47K	1	
R747	ERDS2FJ104	1/4W 100K	1	
R748	ERDS2FJ272	1/4W 2.7K	1	
R748A	ERDS2FJ473	1/4W 47K	1	
R749	ERJ6GEYJ682A	1/10W 6.8K	1	
R749A	ERDS2FJ101	1/4W 100	1	
R751	ERDS2FJ473	1/4W 47K	1	
R752	ERJ8GEYJ220A	1/8W 22	1	
R752A-55	ERDS2FJ104	1/4W 100K	3	
R756	ERDS2FJ681	1/4W 680	1	
R757	ERDS2TJ106T	1/4W 10M	1	
R758	ERDS2FJ101	1/4W 100	1	
R759	ERDS2FJ334	1/4W 330K	1	
R760	ERDS2FJ103	1/4W 10K	1	
R761, 62	ERDS2FJ104	1/4W 100K	2	
R763	ERDS2FJ101	1/4W 100	1	
R764-66	ERDS2FJ103	1/4W 10K	3	
R767, 68	ERDS2FJ680	1/4W 68	2	
R769	ERDS2FJ103	1/4W 10K	1	
R770	ERJ6GEYJ224A	1/10W 220K	1	
R770A	ERDS2FJ472	1/4W 4.7K	1	
R771	ERDS2FJ223	1/4W 22K	1	
R772	ERDS2FJ471	1/4W 470	1	
R773	ERDS2FJ223	1/4W 22K	1	
R774	ERDS2FJ472	1/4W 4.7K	1	
R775, 76	ERDS2FJ473	1/4W 47K	2	
R777-79	ERDS2FJ104	1/4W 100K	3	
R780, 81	ERDS2FJ223	1/4W 22K	2	
R782	ERDS2FJ102	1/4W 1K	1	
R783	ERDS2FJ103	1/4W 10K	1	
R784	ERDS2FJ102	1/4W 1K	1	
R785, 86	ERDS2FJ123	1/4W 12K	2	
R787, 88	ERDS2FJ102	1/4W 1K	2	
R789-96	ERDS2FJ104	1/4W 100K	3	
R803, 04	ERDS2FJ153	1/4W 15K	2	
R805	ERDS2FJ473	1/4W 47K	1	
R806	ERDS2FJ333	1/4W 33K	1	
R807	ERDS2FJ273	1/4W 27K	1	
R809-11	ERDS2FJ223	1/4W 22K	3	
R812-14	ERDS2FJ333	1/4W 33K	3	
R815, 16	ERDS2FJ473	1/4W 47K	2	
R817	ERDS2FJ103	1/4W 10K	1	
R818	ERDS2FJ153	1/4W 15K	1	
R820	ERDS2FJ274	1/4W 270K	1	
R821	ERDS2FJ822	1/4W 8.2K	1	
R824, 28	ERDS2FJ823	1/4W 82K	2	
R829, 30	ERDS2FJ223	1/4W 22K	2	
R831	ERDS2FJ562	1/4W 5.6K	1	
R832	ERDS2FJ123	1/4W 12K	1	
R833, 34	ERDS2FJ104	1/4W 100K	2	
R839, 40	ERDS2FJ102	1/4W 1K	2	
R871, 72	ERDS2FJ105	1/4W 1M	2	
R877, 78	ERDS2FJ105	1/4W 1M	2	
R891, 92	ERDS2FJ102	1/4W 1K	2	
R893	ERDS2FJ103	1/4W 10K	1	
R894	ERDS2FJ153	1/4W 15K	1	
R895, 96	ERDS2FJ102	1/4W 1K	2	
R897	ERDS2FJ103	1/4W 10K	1	
R898	ERDS2FJ224	1/4W 220K	1	
R900	ERDS2FJ103	1/4W 10K	1	
R901	ERDS2FJ223	1/4W 22K	1	
R902, 03	ERDS2FJ103	1/4W 10K	2	
R904	ERDS2FJ223	1/4W 22K	1	
R905-07	ERDS2FJ683	1/4W 68K	3	
R908	ERDS2FJ101	1/4W 100	1	
R914, 15	ERDS2FJ103	1/4W 10K	2	
R917	ERDS2FJ271	1/4W 270	1	
R918, 19	ERDS2FJ223	1/4W 22K	2	
R920-26	ERDS2FJ271	1/4W 270	7	
R927	ERDS2FJ181	1/4W 180	1	
R928, 29	ERDS2FJ682	1/4W 6.8K	2	
R930	ERDS2FJ103	1/4W 10K	1	

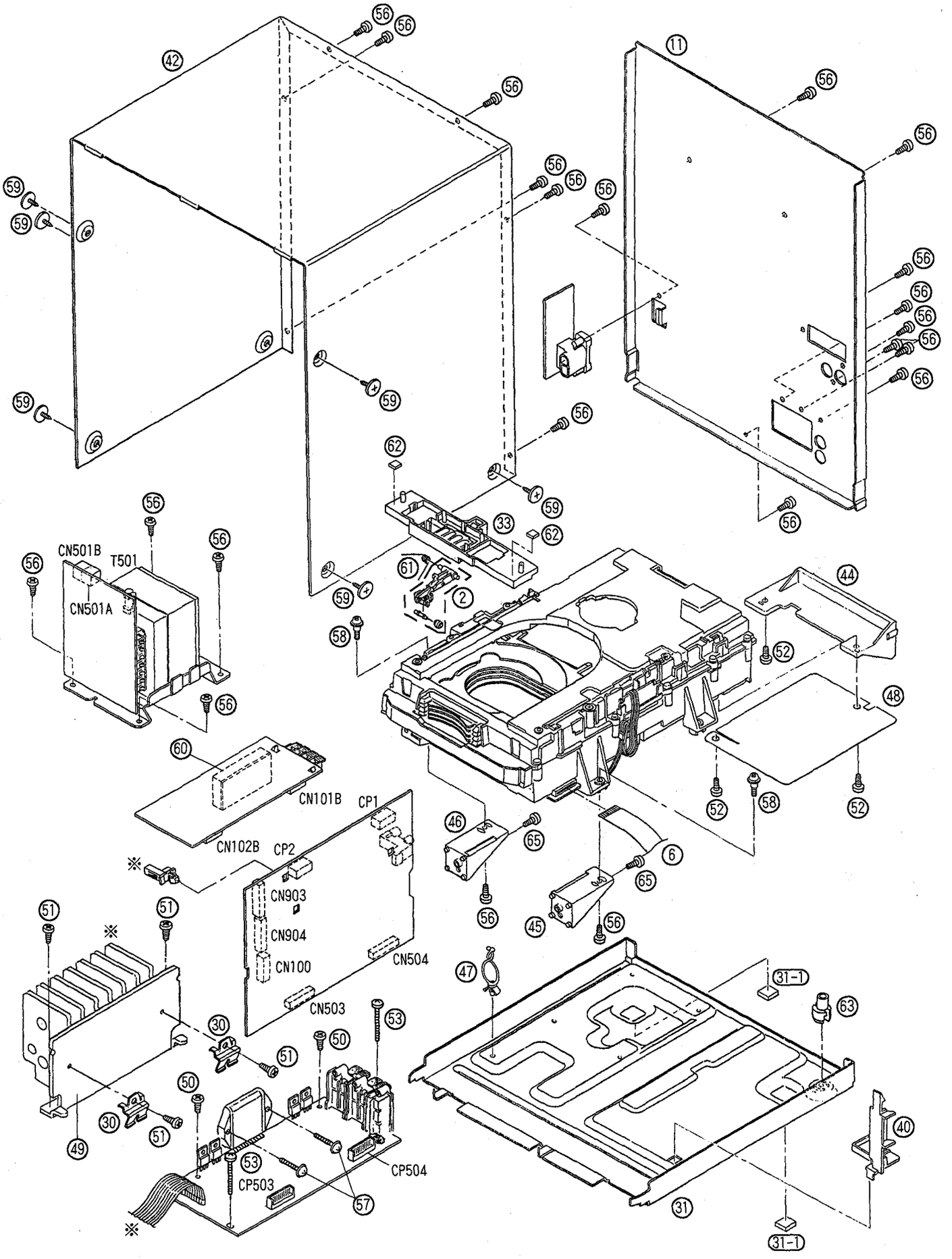
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R936	ERDS2FJ103	1/4W 10K	1	
R937	ERDS2FJ472	1/4W 4.7K	1	
R938	ERDS2FJ101	1/4W 100	1	
R939	ERDS2FJ472	1/4W 4.7K	1	
R940, 41	ERDS2FJ682	1/4W 6.8K	2	
R942	ERDS2FJ272	1/4W 2.7K	1	
R944	ERDS2FJ101	1/4W 100	1	
R945	ERDS2FJ104	1/4W 100K	1	
R946	ERDS2FJ272	1/4W 2.7K	1	
R947	ERDS2FJ101	1/4W 100	1	
R948, 49	ERDS2FJ472	1/4W 4.7K	2	
R950	ERDS2FJ222	1/4W 2.2K	1	
R951	ERDS2FJ101	1/4W 100	1	
R952	ERDS2FJ821	1/4W 820	1	
R952A	ERDS2FJ222	1/4W 2.2K	1	
R953	ERDS2FJ393	1/4W 39K	1	
R953A, 54	ERDS2FJ272	1/4W 2.7K	2	
R955-58	ERDS2FJ101	1/4W 100	4	
R960	ERDS2FJ182	1/4W 1.8K	1	
R961, 62	ERDS2FJ222	1/4W 2.2K	2	
R963	ERDS2FJ122	1/4W 1.2K	1	
R964, 65	ERDS2FJ182	1/4W 1.8K	2	
R966	ERDS2FJ102	1/4W 1K	1	
R968, 69	ERDS2FJ122	1/4W 1.2K	2	
R971	ERDS2FJ102	1/4W 1K	1	
R972	ERDS2FJ821	1/4W 820	1	
R973	ERDS2FJ102	1/4W 1K	1	
R973	ERDS2FJ393	1/4W 39K	1	
R974-78	ERDS2FJ102	1/4W 1K	5	
R979-82	ERDS2FJ271	1/4W 270	4	
R983	ERDS2FJ331	1/4W 330	1	
R984	ERDS2FJ271	1/4W 270	1	
R986	ERDS2FJ271	1/4W 270	1	
R987, 88	ERDS2FJ102	1/4W 1K	2	
R989	ERDS2FJ122	1/4W 1.2K	1	
R990	ERDS2FJ182	1/4W 1.8K	1	
R992, 93	ERDS2FJ331	1/4W 330	2	
R994-99	ERDS2FJ104	1/4W 100K	6	
RJ701	ERJ6GEY0R00A	CHIP JUMPER	1	
RJ702-10	ERJ8GEY0R00A	CHIP JUMPER	9	
RJ721-28	ERJ6GEY0R00A	CHIP JUMPER	8	
RJ750	ERJ6GEY0R00A	CHIP JUMPER	1	
⚠ RLY501	RSY0017M-0	RELAY	1	
S1	RSH1A005	SW	1	
S2, S3	RSH1A032-U	SW	2	
S4	RSH1A005	SW	1	
S5	RSH1A032-U	SW	1	
S701	RSH1A043-U	SW	1	
S901-06	EVQPTD05Q	SW	6	
S908, 09	EVQPTD05Q	SW	2	
S912-32	EVQPTD05Q	SW	21	
S951	RSH1A018-1U	SW	1	
S952, 53	RSH1A019-2U	SW	2	
S971	RSH1A018-1U	SW	1	
S972-75	RSH1A019-2U	SW	4	
⚠ T501	RTP2N3B003	POWER TRANSFORMER	1	
TJ701	EYF8CU	TEST JUMPER	1	
VR101-04	RRN6B05B24TA	VR, GAIN	4	
VR201	RRN6B05B73TA	VR, TAPE SPEED	1	
VR901	EVQVBPF0224B	VR, ENCODER	1	
VR902	RES0018	VR, SOUND EQ	1	
W1	REEX0031	WIRE ASS'Y(3P)	1	
W2	REE0865	FFC(32P)	1	
W200	RWJ0104065CK	FLAT CABLE(4P)	1	
W201	RWJ0208155RX	FLAT CABLE(8P)	1	
W905	REXX0190	WIRE ASS'Y(7P)	1	
X102	RLFDFT18DD	OSCILLATOR	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
X103	SVQ49U722-S	OSCILLATOR	1	
X701	RSXZ16M9M01T	OSCILLATOR	1	
X901	RSXD32K7S02	OSCILLATOR	1	
X902	RSXZ8M00D01T	OSCILLATOR	1	
Z101	EXBF7L355SYV	COMPONENT COMBINATION	1	
Z101A	RLA2Z003M-T	AM ANT/OSC BLOCK	1	
Z102	RLI2Z006M-T	AM IFT	1	
Z120	ENV17290G1Y	FM FRONT END	1	
Z901	RCDGP1U28XD	REMOTE SENSOR	1	
Z971	EXBF7L355SYV	COMPONENT COMBINATION	1	

■ Cabinet Parts Location



We do not supply those items of parts marked ※.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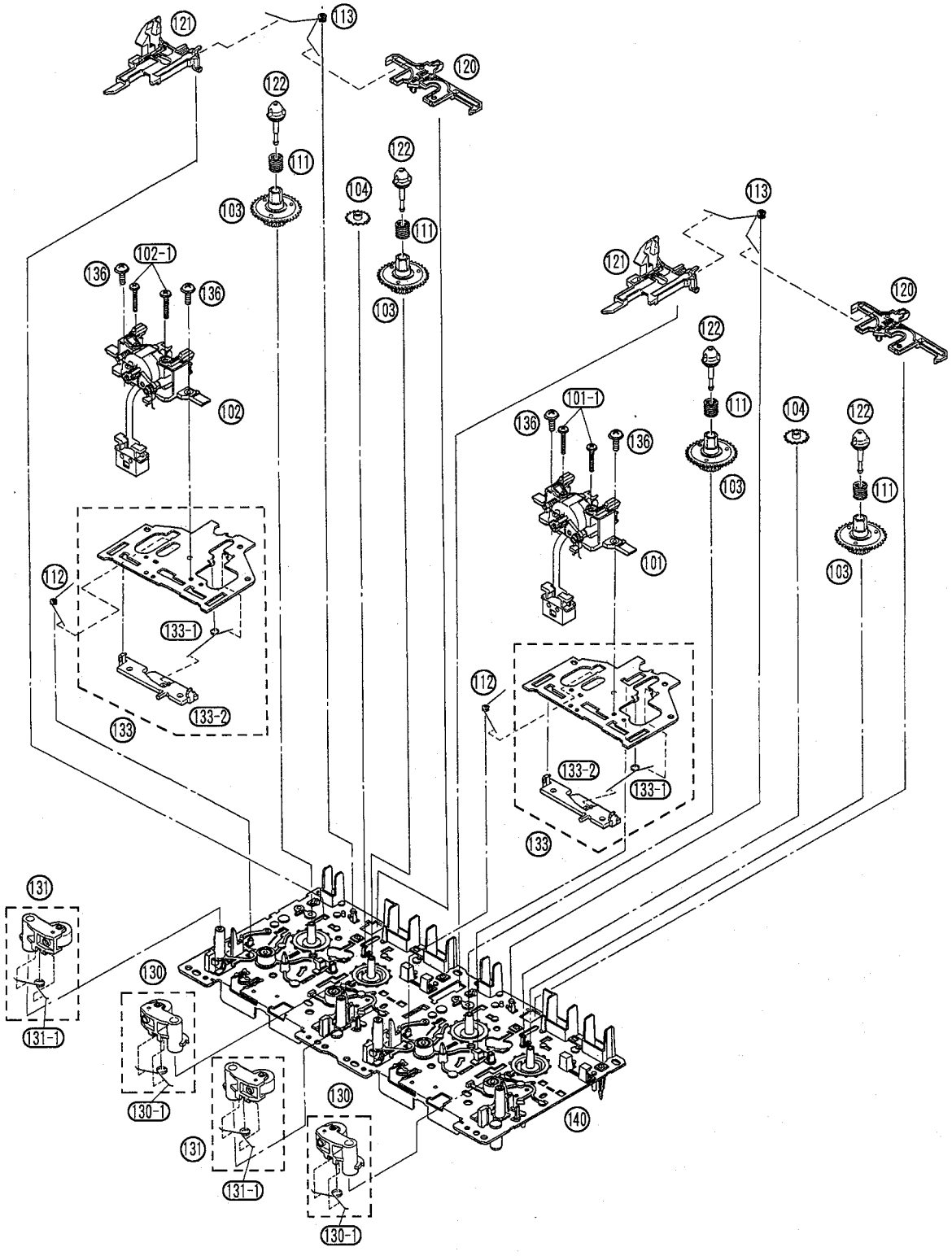
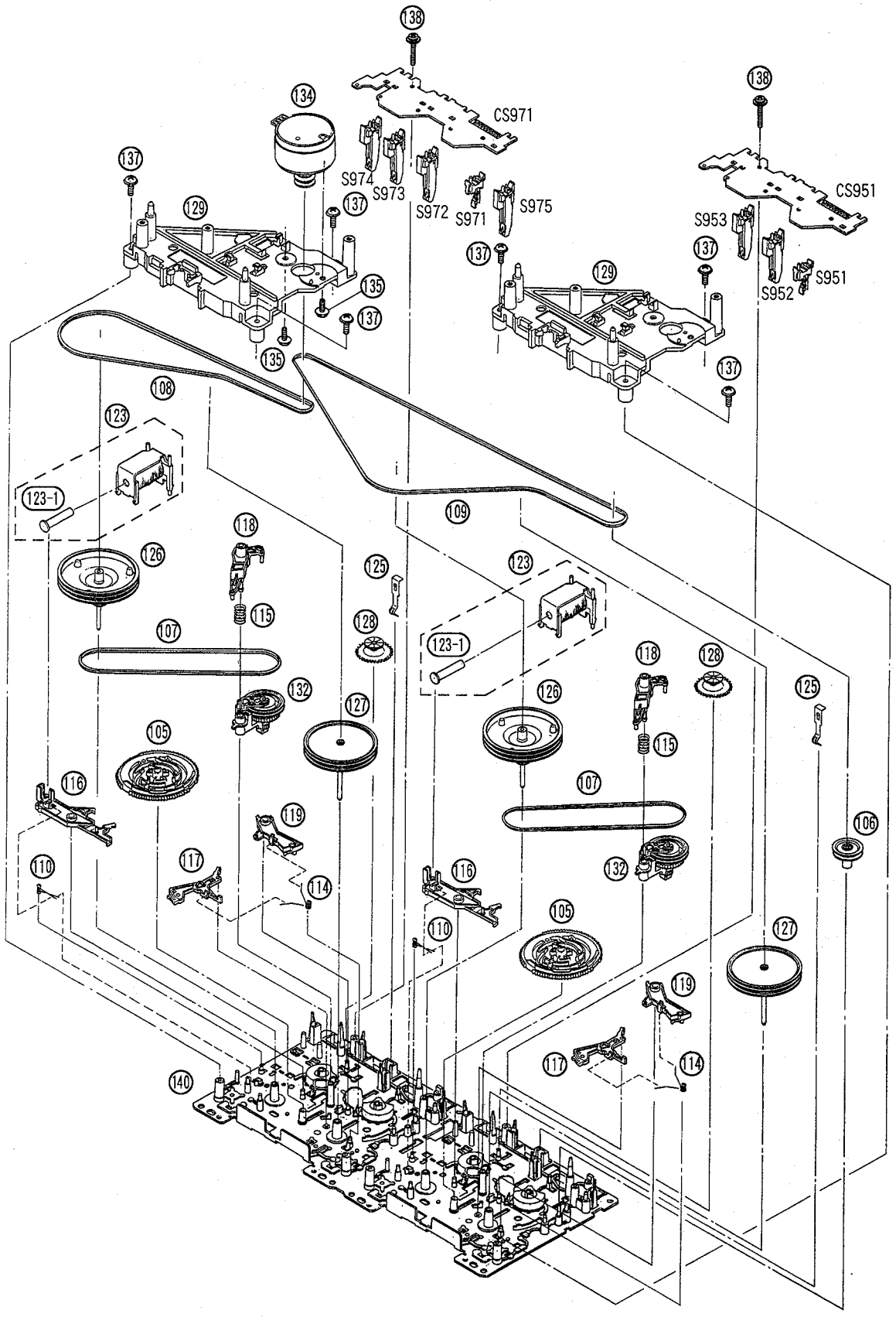
CP503

■ Mechanism Parts Location

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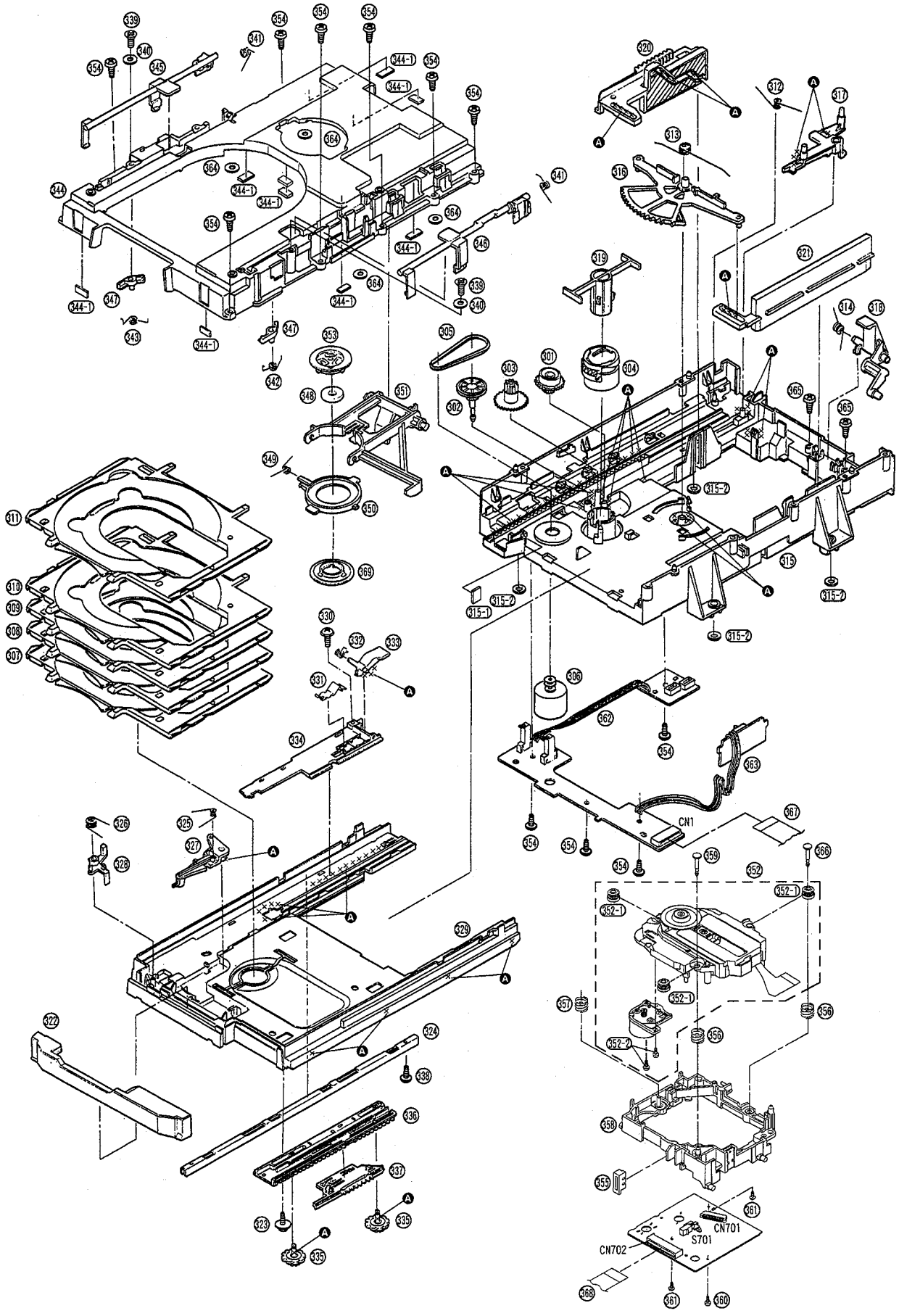
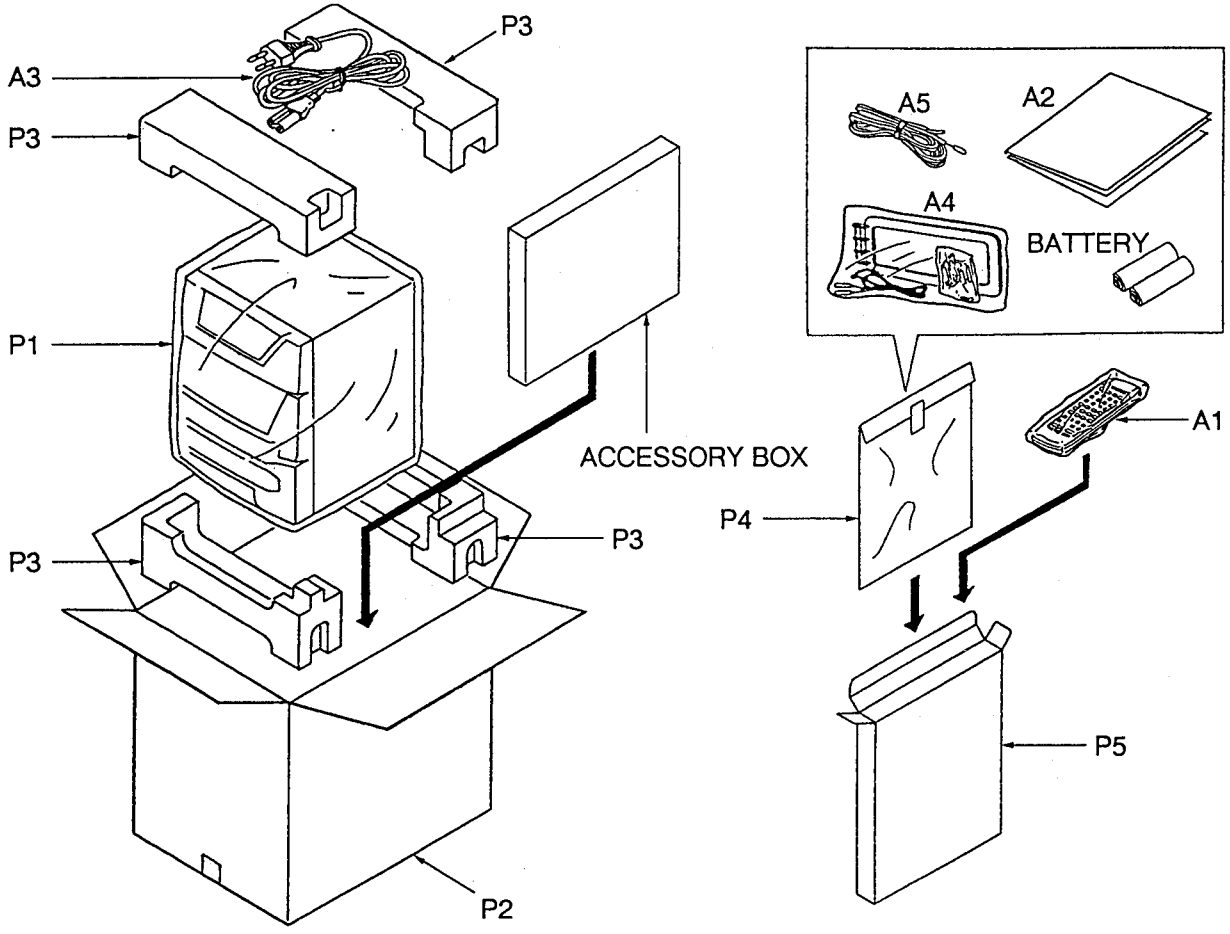
S952
S951

■ Loading Unit Parts Location



■ Packaging



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